

Copyright

DECEMBER, 1913

Registered

The
Public Health Journal

The Official Organ of the Canadian Public Health Association



Vol. IV.

Lumsden Building
TORONTO, ONTARIO

No. 12.

SPECIAL ARTICLES :

**IMMIGRATION AND ITS EFFECTS UPON THE PUBLIC
HEALTH**

P. H. BRYCE, M.D.

PREVENTIVE MEDICINE AND THE FAMILY DOCTOR

ADAM H. WRIGHT, B.A., M.D.

**THE RELATIONS OF THE HEALTH OFFICER TO
THE COMMUNITY**

M. R. BOW, M.D.

SCHOOL BUILDINGS

J. H. PUNTIN, L.R.I.B.A.

**HEATING AND VENTILATING MODERN SCHOOL
BUILDINGS**

S. S. KENNEDY

THE LAND OF THE JEWS

FLORENCE WITHROW, B.A.

INDEX FOR VOLUME IV., 1913—WITH THE JANUARY, 1914 ISSUE.



Ingersoll Cream Cheese

—is a pure wholesome delicacy manufactured under ideal conditions. The same scrupulous care is observed in every detail of its preparation—even to the wrapping.

FIRST—Encased in the finest and most expensive silver-foil paper ;

THEN—Packed in pure, damp-proof vegetable parchment.

HENCE—Always fresh and good.

Sold by all Grocers. 15c. and 25c. a package.

MANUFACTURED BY
THE INGERSOLL PACKING CO.
LIMITED

INGERSOLL,

ONTARIO

One of the surest ways
of keeping in good health
is to eat Pure Food . .

The Meat Products of The Wm. Davies Co., Ltd. TORONTO

are prepared under Government inspection, which insures that the meat is from animals free of disease, and that the product has been prepared according to Governmental regulations.

Davies' products are sold by most Provision Merchants, and through the Company's own stores in Ontario and Quebec.



HORLICK'S MALTED MILK

— IN TYHOID FEVER —

Pure, rich milk combined with an extract of malted grains, highly concentrated, partially pre-digested palatable, and readily assimilated, makes **HORLICK'S Malted Milk** the physician's first choice when selecting a reliable nutriment in the treatment of Typhoid and other low fevers.

HORLICK'S Malted Milk has proved invaluable for many years past in the various diseases and conditions in which a complete, well-balanced diet is of vital importance. A glassful, taken hot upon retiring, proves an excellent "Night Cap" for the physician, when tired out or "chilled through."

Samples sent, free and prepaid, to the profession, upon request.

HORLICK'S MALTED MILK CO.
559 Pius IX Ave., Maisonneuve, Montreal, Quebec



An Eminent Scientist's View

Among the many scientists who have made a study of the bacteriological and chemical conditions of oysters, perhaps none have done so more thoroughly than Dr. Julius Nelson, Professor of Biology, Rutgers College, New Brunswick, N. J., and Biologist of New Jersey State Agricultural College Experiment Station. With his consent the following is published:

"Oysters are a good food. Oysters come nearer in composition to cow's milk than do most other meats, as all the four kinds of nutrients needed are present in good degree. Oysters have a larger excess of the flesh building substance relative to the other constituents than milk, so we 'balance the ration' by addition of starchy food and fats when eating oysters, thus securing a good meal at a cost that compares favorably with that when other meats are chosen. Oysters have some special points of advantage, among which the following:

"(1) The sea salts that they contain are useful in regulating and stimulating nutritional processes.

"(2) They are the tenderest of meats and easily digestible, and suitable even for persons of sedentary habits.

"(3) In addition to being easily safeguarded against accidental contamination, there is no oyster parasite known, that will live in the human system.

"(4) Oysters are clean feeders; they are practically confined to a selection of the beautiful little plants known as diatoms. I consider oysters a valuable and wholesome food."

After reading from such an authority, even the most timid lover of good things to eat, need not hesitate to enjoy the delicious, appetizing oyster, to the gratification of his palate and the benefit of his digestion.

CONNECTICUT OYSTER CO.

"Canada's Exclusive Oyster House"

50 Jarvis Street

-

Toronto, Ontario

CONGRESS, 1914

Fort William and Port Arthur

Canadian Public Health Association

PATRON

FIELD MARSHAL, HIS ROYAL HIGHNESS, THE GOVERNOR GENERAL

VICE-PATRONS

LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G.,

RT. HON. R. L. BORDEN, P.C., M.P., G.C.V.O.

PAST HONORARY PRESIDENTS AND HONORARY VICE-PRESIDENTS

Sir Edmund Osler
Sir James A. Grant.
Hon. A. L. Sifton.
Hon. J. M. Methuen
Rt. Hon. Sir Wilfred Laurier

Hon. W. Scott.
Colonel Hon. S. Hughes.
Hon. Martin Burrell.
J. C. Eaton, Esq.
Hon. W. J. Hanna.

Hon. Clifford Sifton.
Hon. Sir James Whitney.
Hon. G. H. Murray.
E. R. Wood, Esq.
Hon. Sir R. McBride.

Hon. Sir R. P. Roblin.
Hon. H. K. Flemming.
Hon. Sir Lomer Gouin
Hon. J. D. Hazen.
Sir William Van Horne
Hon. George Langley.

HONORARY PRESIDENT

ADAM H. WRIGHT, M.D., TORONTO

Chairman of the Provincial Board of Health, Ontario.

PRESIDENT

MAURICE M. SEYMOUR, M.D., REGINA

VICE-PRESIDENTS

J. D. PAGE, M.D., QUEBEC. T. AIRD MURRAY, C.E., REGINA. DUNCAN M. ANDERSON, M.D., TORONTO.
PROFESSOR J. A. AMYOT, M.D., University of Toronto. T. H. WHITELAW, M.D., EDMONTON.
P. B. TUSTIN, WINNIPEG.

GENERAL SECRETARY

MAJOR LORNE DRUM, M.D., D.P.H., OTTAWA

TREASURER

GEORGE D. PORTER, M.B., TORONTO

EXECUTIVE COUNCIL

FAST PRESIDENTS:
T. A. Starkey, M.D., D.P.H., Montreal.
Charles A. Hodgetts, M.D., D.P.H.,
Ottawa.
J. W. S. McCullough, M.D., Toronto.
F. H. Bryce, M.A., M.D., Ottawa.
F. Montisambert, M.D., I.S.O., Ottawa.
E. F. Lachapelle, M.D., Montreal.
Col. G. C. Jones, G.C.H.S., D.G.M.S.,
Ottawa.
J. D. Rutherford, H.A.B.V.S., C.M.G.,
Calgary.
C. J. C. O. Hastings, M.D., Toronto.
H. W. Hill, M.D., London.
E. E. Weddhouse, M.D., Fort William

J. Goselin, M.D., Quebec.
Albert Chevalier, Esq., Montreal.
Prof. Fraser Gurd, M.D., Montreal.
Murray McLaren, M.D., St John
Rev. Mr. White, D.D., St John
F. W. Wainwright, M.D., Fredericton
John Stewart, M.D., Halifax
S. L. Walker, M.D., Truro
F. L. Ford, M.D., Milton
H. D. Johnson, M.D., Charlottetown
S. E. Jenkins, M.D., "
I. J. Yeo, M.D., "
G. D. Mackie, M.I.M.C.E., "
Swift Current
W. A. Thomson, M.D., Regina
D. A. Stewart, M.D., Winnipeg

F. F. Westbrook, M.D., Vancouver
F. T. Underhill, M.D., Vancouver
Dr. Arthur Nelson, B.C.
W. C. Laidlaw, M.D., Edmonton
D. G. Bevell, M.D., Edmonton
Harold Orr, M.D., Medicine Hat
M. B. Bow, M.D., Regina
Mrs. A. M. Huotia, Toronto
Mrs. J. C. McElmont, Quebec
W. E. Struthers, M.D., Toronto
Miss Helen E. Y. Reid, Montreal
Major D. B. Bentley, M.D., London
Major F. L. Vaux, M.D., Winnipeg
W. W. Andrews, L.L.D., Regina
D. I. Dunn, M.D., Edmonton

EXECUTIVE COMMITTEE

THE PRESIDENT, GENERAL SECRETARY, and TREASURER, ex officio, and
DR. C. J. C. O. HASTINGS Medical Officer of Health, Toronto, DR. C. A. HODGETTS, Ottawa
DR. DUNCAN M. ANDERSON, Toronto

Active membership, \$3.00 per annum, is obtainable by Canadians directly interested in matters bearing on public health, such as physicians, engineers, architects, etc., and permits official co-operation in the work of the Association. For others, subscription to *The Public Health Journal* at \$2.00 per annum includes associate membership: see terms, etc., page iii.

Make Cheques, etc., payable to the "Treasurer, Canadian Public Health Association."



"NOSTRUMS AND QUACKERY"
 (Second Edition)
Caveat Emptor! (Let the Buyer Beware!)

If you would protect your patients against the dangers of "patent medicines" and the wiles of the quack, you need the book "Nostrums and Quackery." The composition of fraudulent "patent medicines" and the dangers one runs in taking them, are explained in this book. The inner workings of quack concerns, the methods employed by these charlatans in obtaining victims, the heartlessness of the fraud on which all irregular medical practice is based—these too, are made plain.

HERE ARE A FEW OF THE MANY SUBJECTS WITH WHICH IT DEALS:

Advertising Specialists	Duodenal Cures	Medical Institutions	Baby Killers	Headache Cures
Cancer Cures	Drug Cures	Obesity Cures	Diabetes Cures	Fake Collaps
Consumption Cures	Mechanical Fakes	Asthma Cures	Hair Dyes	Tonicinals

This book is issued in a permanent and attractive form, bound in dark green cloth, stamped in gold. More than 700 pages. Over 300 illustrations.

Price **\$1.50**, Postpaid Send Postal for a Descriptive Circular

"CONSUMPTION CURE FAKES" is the name of one of many pamphlets issued by the Association. It is an illustrated brochure that exposes some of the most widely advertised frauds sold as cures for consumption. Postpaid, 10 cents a copy.

AMERICAN MEDICAL ASSOCIATION, 535 N. Dearborn St., Chicago

THE JOURNAL OF COMMERCE

With which is incorporated THE SHAREHOLDER

TWO of the oldest and most reliable Weekly Journals, recently amalgamated to strengthen the work heretofore done by each in the field of Commerce, Finance, Insurance and Industry.
 Editor, J. C. Ross, M.A.

Canada's greatest asset is her natural resources, and the commodities by which she is best known are the products of industries engaged in the development of these resources. Canadian ASBESTOS, NICKEL and COBALT control the Markets of the world for these commodities, while her SILVER, PULP and PAPER, and GRAIN and GRAIN PRODUCTS are dominant factors of the world's supplies. The only Periodicals which are devoted entirely to these industries are:

CANADIAN MINING JOURNAL, published twice a month. Editor, *Reginald E. Hore, M.Sc.*

PULP and PAPER MAGAZINE OF CANADA, published twice a month. Editor, *A. Gordon McIntyre, B.A., B.Sc.*

CANADIAN MILLER and CEREALIST, published once a month. Editor, *J. G. Adams, B.A.*

CANADIAN TEXTILE JOURNAL, a monthly periodical devoted entirely to Textile Manufacturing, is published from the same Offices. Editor, *E. Stanley Bates.*

In addition to publishing the above mentioned Journals, we are especially equipped to do all kinds of
FINE BOOK, CATALOGUE AND JOB PRINTING.

MONTREAL OFFICE:

Industrial and Educational Press, Limited
 Read Building

TORONTO OFFICE:

Industrial and Technical Press, Limited
 44-46 Lombard St.

RONUK FLOOR POLISH

Awarded Gold Medal at 17th International Congress of Medicine, London, 1913
Six Bronze Medals by the Royal Sanitary Institute; Certificate of Incorporated
Institute of Hygiene.

Ronuk Floor Polish is a unique composition quite different from the usual waxes and varnishes. To physicians and hygienists it will particularly commend itself for hospitals or residences, because it is a very effective germicide. After careful investigation and analysis the "Lancet" says this:

"Ronuk is an excellent floor polish, preserving a sanitary condition of the floor, sealing up all germ harbours, and presenting a surface which pleasingly evidences an appreciation of sanitary principles."

Ronuk sinks into the pores of the wood, bringing out all its beauty, and producing a hard durable Surface, exceptionally easy to keep clean and polished. It never has to be scrubbed.

Applied to linoleum it lengthens its life and lessens the cost of its upkeep.

Ronuk is sold at 10c., 20c., 35c. and \$1.00 the tin, and in 7 lb. and 14 lb. tins for institutions, etc. Our Contract Department will undertake the polishing and maintenance of floors for institutions or residences at a fixed rate per annum.

For Further Information Address

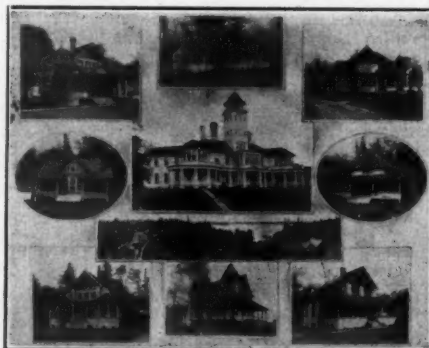
RONUK LIMITED
PORTSLADE - ENGLAND
Canadian Head Office:
53 YONGE STREET, TORONTO

"NO BETTER ATMOSPHERE IN THE WORLD FOR A CONSUMPTIVE THAN THAT OF YOUR OWN MUSKOKA."

Sir Wm. Osler, distinguished Canadian, now Regius Professor of Oxford University formerly of Baltimore, Md.

Regular Rates
\$15 to \$20
per week

Special Rates
For Bed
Patients in
Separate
Accom-
modation



MUSKOKA COTTAGE SANATORIUM
Gravenhurst - - - - - Ontario, Canada

For booklet apply to W. B. KENDALL, M.D., C.M., L.R.C.S., L.R.C.P., Physician-in-Chief.

SUBSCRIBERS: When you receive notice that your subscription has expired, renew at once. It will save needless delay, insure prompt attention and prevent you missing numbers, necessary to complete your volume.

The Public Health Journal

The Official Organ of the Canadian Public Health Association

DECEMBER, 1913, INDEX

NOTE [Reproduction of contents may be made, accompanied by acknowledgement to *The Public Health Journal*.]

	Page.	Design, by J. H. Puntin, L.R.I.,	
INTRODUCTORY	639	B.A.	654
FRONTISPIECE	640	Heating and Ventilating Modern	
SPECIAL ARTICLES—		School Buildings, by S. S. Ken-	
Immigration and Its Effects Upon		nedy.	661
the Public Health, by P. H.		The Land of the Jews, by Flor-	
Bryce, M.D.	641	ence Withrow, B.A.	665
Preventive Medicine and the Fam-		EDITORIALS	675
ily Doctor, by Adam H. Wright,		BOOK REVIEWS	677
B.A., M.D.	648	IDEAS AND INVENTIONS	678
The Relations of the Health Officer		MEETINGS AND REPORTS	680
to the Community, by M. R.		CORRESPONDENCE CORNER	683
Bow, M.D.	651	FORECAST AND REVIEW	684
School Buildings: Some Notes on		Point of Attack in Sex Education.	
Hygienic Principles Influencing		The Fundamental Right to Leisure.	

THE PUBLIC HEALTH JOURNAL, official organ of the Canadian Public Health Association and allied bodies, co-operating with the American Public Health Association, the Commission of Conservation, the National Council of Women, Municipal, State, Provincial and Federal Health Departments, etc., is published on THE FIRST OF EACH MONTH by the York Publishing Company, Limited, Lumsden Building, Toronto.

SUBSCRIPTION TERMS: Yearly \$2.00; Single copies 20 cents.

POSTAGE is prepaid by the Journal for subscribers on above terms.

PAYMENTS should be made by EXPRESS OR POSTAL MONEY ORDER OR CHEQUE MARKED AT PAR. to THE PUBLIC HEALTH JOURNAL, and not to individuals.

CHANGE OF ADDRESS: In all changes of address it is necessary that the old as well as the new address be given.

LETTERS will receive prompt consideration in the order of their arrival; those for the Editorial Department should be written only on one side of paper and have included with private addresses the pseudonyms, if desired, over which they may be published.

SPECIAL CONTRIBUTIONS should be illustrated by photographs or drawings (in black ink on white paper) and accompanied by postage for return, if not used. Original articles suitable for publication are solicited, and accepted with the understanding that they are for publication in this journal only.

REPRINTS will be furnished at the following prices provided a request accompanies the MS.—

Two Page	100 copies, \$2.75; each extra 100 copies 15 cents
Four Page	100 copies, \$4.00; each extra 100 copies 20 cents
Six Page	100 copies, \$5.75; each extra 100 copies 30 cents
Eight Page	100 copies, \$7.00; each extra 100 copies 35 cents

Covers cost \$2.50 for first 100 and \$1.00 for each extra 100

ADVERTISING RATES will be furnished on application.

ADDRESS in every case, "THE PUBLIC HEALTH JOURNAL" Lumsden Building Toronto, Canada; adding name of department it is desired to reach as, "Editorial" or "Business."

ENTERED according to act of Parliament of Canada, in the year one thousand nine hundred and thirteen at the Department of Agriculture. All rights reserved.

For Light and Nourishing Food it's Always Safe to Recommend

CHRISTIE BISCUITS

the purest of all pure foods—biscuits just as near perfection as first-class ingredients and scientific baking, by twentieth century methods, can make biscuits.

Christie Biscuits mean the best ingredients money can buy—all first-class table quality—mixed and baked in the Christie scientific way and packed in dust and damp proof tins and packages to assure lasting goodness. You may heartily recommend Christie Biscuits, if you want to recommend the best biscuits on the market—not because we say so, but because the particular housewives of Canada have proved them so.

N.B.—Our Zephyr Cream Sodas crushed in Cream or Fresh Sweet Milk certainly do make a light and nourishing breakfast.

CHRISTIE, BROWN & CO., Limited
TORONTO, ONTARIO

READY FOR THE CHILLY DAYS ?

The best protection against sudden changes of temperature is a robust figure that comes from a nourishing food.

SHREDDED WHEAT

is the real Health Food that is always safe to recommend.

It is easily digested, supplies all the proteids and heat-making units needed for the Conservation of health, and gives warmth and strength to the body.

Our process of manufacture insures crispness of the shreds.

Served with hot milk it makes a delicious combination with prunes, sliced bananas or any kind of preserved fruit.

All good dealers sell SHREDDED WHEAT.

The Canadian Shredded Wheat Co., Ltd.

Toronto Office : 49 Wellington St. East.

Niagara Falls, Ontario

(W-48)

Proven Purest and Best —



E. D. Smith's & Son, Ltd.

Jams, Jellies and Marmalade

¶ The Trademark that stands for Quality.

¶ See Government Analysis, (Bulletin No. 244).

—Also Manufacturers of—

Cordials, Catsup and Canned Goods

Winona, Ont.



MODIFIED MILK POWDER (C.M.P.) SWEET WHEY POWDER (C.M.P.)

IT is only recently that physicians have generally realized the importance of a *Split Proteid* modification of milk for infant feeding, whereby the casein content is lowered and the milk-albumen content is raised. This cannot be accomplished by the customary home modification, but is the basis of our preparations as appears from the following analysis:

Modified Milk Powder (C.M.P.) Sweet Whey Powder (C.M.P.)

Fat	11.55%
Casein	9.50
Lact. Albumen..	9.60
Milk Sugar	60.10
Ash	7.75
Moisture	1.50
	<hr/>
	100.00%

Casein35%
Lact. Albumen..	12.38
Milk Sugar	76.55
Ash	9.10
Moisture	1.62
	<hr/>
	100.00%

If a variant from the above proportions is needed by a physician in a given case, it can readily be obtained by a combination of the two in varying proportions. Free samples and pamphlets on the same gladly sent to any physician.

CANADIAN MILK PRODUCTS, LIMITED

MAIL BUILDING TORONTO, ONT.

If you have a baby you owe it to the child to write to us.

Our scientifically prepared foods are saving many lives.

The Best Antiseptic for Purposes of Personal Hygiene

LISTERINE

Being efficiently antiseptic, non-poisonous, and of agreeable odor and taste, Listerine has justly acquired much popularity as a mouth-wash, for daily use in the care and preservation of the teeth.

As an antiseptic wash or dressing for superficial wounds, cuts, bruises, or abrasions, it may be applied in its full strength or diluted with one to three parts water; it also forms a useful application in simple disorders of the skin.

In all cases of fever, where the patient suffers so greatly from the parched condition of the mouth, nothing seems to afford so much relief as a mouth-wash made by adding a teaspoonful of Listerine to a glass of water, which may be used ad libitum.

As a gargle, spray or douche, Listerine solution, of suitable strength, is very valuable in sore throat and in catarrhal conditions of the mucous surfaces; indeed, the varied purposes for which Listerine may be successfully used stamps it as an invaluable article for the family medicine cabinet.

Special pamphlets on dental and general hygiene may be had upon request.

LAMBERT PHARMACAL COMPANY

LOCUST and TWENTY-FIRST STREETS

ST. LOUIS, MO.

KRESO

An Ideal Disinfectant, Germicide, Deodorant

Antiseptic and Parasiticide

For Hospitals, Veterinary and Domestic Use

Write for Descriptive Booklet

Parke, Davis & Co.

Manufacturing Chemists and Biologists,

WALKERVILLE, ONTARIO

Eastern Depot, 375 St. Paul Street, MONTREAL, QUE.

?

Are you particular as to the condition of the iron in your Blaud preparations ?

Frosst's Perfected Blaud Capsules present True Ferrous Carbonate.

Each 10 grain Capsule contains, approximately, 1 grain of iron.

Charles E. Frosst & Co.
Montreal

GONOSAN

KAVA-SANTAL (RIEDEL)

Gonosan is strictly a preparation of the Kava-resins (20%) in the purest East Indian Sandalwood oil (80%). Kava lessens the sensibility of the mucus membranes and Gonosan, therefore, combines the valuable properties of an anodyne to the membranes of the urinary tract with effective antiseptic properties for reducing discharge.

GONOSAN IS THE NATURAL COADJUTOR OF INJECTIONS

On account of the high quality of the sandalwood oil—which is unequalled by any of its competitors or numerous imitations—Gonosan is free from any deleterious by-effects.

Professor Renault, of the Cochin Annexe, Paris, says: "The action of Gonosan is quite harmless and I recommend it on this account; for it does not affect either the stomach, bowels, skin or kidneys."

As to its therapeutic efficiency we refer to the statements of NEISSER, ZEISSL, BEHRING and RUNGE, who among many others have written extensively on the subject.

Literature
and Samples

Henry A. Rowland, Toronto

Sole Agent
for Canada

An Important Report

By Prof. W. A. Puckner

Secretary of the Council on Pharmacy and Chemistry
American Medical Association

In the Journal of the American Medical Association, September 13, 1913, Professor Puckner reports the result of the investigation of products of a number of pharmaceutical houses. In this report are embodied the results obtained by Dr. R. A. Hatcher, of Cornell University Medical School, who made a special examination of the various digitalis products of these pharmaceutical houses, demonstrating the following

FACTS

First.—That commercial digitalis preparations vary most widely in activity.

Second.—That Mulford Digitalis, the most active, is four times as active as the weakest.

Third.—That the digitalis prepared by other firms, assumed to be physiologically assayed, showed a variation of more than 100 per cent. in strength.

Fourth.—That the digitalis next in strength to the Mulford preparation, was only 65 per cent, and the weakest, 29 per cent. in activity.

CONCLUSIONS

While there is no official standard of activity for digitalis, Dr. Hatcher adopted the Mulford Fluidextract Digitalis as the standard of comparison, because its activity was that of a good digitalis. The report proves the activity and reliability of the Mulford Digitalis, and coincides with the former report made by the United States Bureau of Hygiene, tabulated in Bulletin No. 48, December, 1908, by Edmunds and Hale, relating to the Mulford Fat-free Tincture of Digitalis.—**Digitol.**

No arguments are needed to convince the careful physician and druggist why they should demand Mulford Standardized Pharmaceuticals.

H. K. MULFORD CO., Philadelphia

Pharmaceutical and Biological Chemists

New York	Boston	Kansas City	St. Louis	New Orleans	San Francisco
Chicago	Atlanta	Dallas	Seattle	Minneapolis	Toronto

LABORATORY SUPPLIES

INGRAM & BELL, LIMITED

We are in a position to fully equip any size laboratory, being representatives of some of the best known firms in these lines, as follows :

Microscopes—Bausch & Lomb, Zeiss, Spencer.

Autoclaves and Incubators—Bramhall Deane Co. of N.Y.

C. P. Chemicals—Baker & Adamson, Kahlbaums, Mercks.

Centrifuges—International Instrument Co., Cambridge, Mass.
—Shelton Electric Co.

Laboratory Glassware—Direct Importers of Jena Glass and
Resistance Chemical Glassware.

Haemocytometers—Thoma, Tück.

Grubler's Stains, Haemoglobinometers, etc., etc.

We solicit your orders. Quotations gladly given.

Ingram & Bell, Limited

New Address : 256 McCaul St. (1 door south of College) Toronto



VACCINES

A THERAPY that physicians are beginning to employ more and more every day and which the laity is correspondingly beginning to respect. The successful results secured in the immunization of the U. S. troops along the Mexican frontier against typhoid fever is indicative of what value this therapy may become to the individual, to the nation, and to the world.

In keeping with the constantly increasing demand for a vaccine that would produce specific results, conveniently offered, and easily manipulated, with clear directions, not involving the necessity of preliminary pondering as to how or how not to employ

it, we have arranged to offer commercially such a vaccine with the authorities of the Toronto General Hospital, who for some time past from their Department of Therapeutic Inoculation when so requested have been supplying biological products which had given satisfaction along the lines indicated.

The following vaccines—

1. Bacillus Coll
2. Compound Acne
3. Compound Staphylococcus
4. Erysipelas.
5. Gonococcus.
6. Gonococcus, Mixed
7. Pneumococcus.
8. Streptococcus (Polyvalent)

- 9 Compound Typhoid.
- 10 Tuberculin (B.E.), (O.T.),
" (Filtrate),
" (T.R.),
Human or Bovine,
or Mixed,
- 11 Bacillus of Influenza,
- 12 Compound Coryza—

we now offer to all our patrons in packages of four ampoules. \$2.00
25-cc. Rubber-stoppered automatic sealing bottles, per bottle. 5.00
50-cc. Rubber-stoppered automatic sealing bottles, per bottle. 10.00,
guaranteed absolutely sterile for two years. Special quantity prices to Boards of Health and Hospitals on application.

The special feature that we claim for these Vaccines is success when administered in warranted conditions and we do cordially claim this. A trial will attest our statement. These Vaccines and Tuberculins are furthermore a distinctly Canadian product and should accordingly appeal to the physicians of the Dominion.

AUTOGENOUS VACCINES prepared in the quantity desired upon receipt of a culture and slide of the infection from the case at hand.

THE WASSERMAN REACTION at \$10.50. Tube for blood sample mailed on application with complete directions for taking the blood, together with a blank for the history of the case. It makes no difference whether a physician resides in British Columbia or New Brunswick, a sample of blood in a tube such as we furnish can be transmitted with absolute security. Results quick, sure and guaranteed.

Always at the service of the Profession,

The J. F. HARTZ CO., Limited,

PHYSICIANS' SUPPLIES,

406-408 Yonge Street - TORONTO, ONT.

Branches: DETROIT, MICH. and CLEVELAND, OHIO

Merck's Archives

presents each month a review of progress in the treatment of disease and modern discoveries in drug therapy.

It is eminently a journal for the busy general practitioner.

A pleasing variety is afforded by a department of General Interest and of Miscellany, Editor's Notes, Book Notes, etc.

Sample copies furnished to physicians on request

Subscription price, \$1.00 a year

PUBLISHED BY

MERCK & CO.

45 Park Place

- New York



The Peculiar Advantage of the

Marvel "Whirling Spray" Syringe

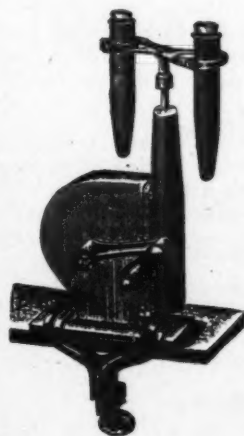
Prominent physicians and gynecologists everywhere recommend the MARVEL Syringe in cases of Leucorrhea, Vaginitis, and other vaginal diseases. It always gives satisfaction.

The Marvel Company was awarded the Gold Medal, Diploma and Certificate of Approval by the Societe D'Hygiene de France, at Paris, October 9, 1902.

All Druggists and Dealers in Surgical Instruments sell it. For Literature address

is that **The Marvel**, by its centrifugal action **dilates and flushes** the vaginal passage with a volume of whirling fluid, which smooths out the folds and permits the injection to come in contact with its entire surface.

MARVEL COMPANY, 44 E. 23rd St., New York



Centrifuges and other Analysis Equipments

¶ We carry at our establishments in Toronto, Winnipeg and Vancouver complete stocks of CENTRIFUGES, operated by hand, by electricity, and by water power.

¶ We have supplied a number of Municipalities with water power CENTRIFUGES for use in their medical health department. This is a very satisfactory apparatus where a medium water pressure is obtainable and can be supplied complete at \$12.00 each.

THE STEVENS COMPANIES

396 Notre Dame Ave.
WINNIPEG

145 Wellington St. W.
TORONTO

748 Richards St.
VANCOUVER

The New Toronto General Hospital

Is a marvel of completeness to the most minute detail. Nothing has been neglected in the perfecting of the most up-to-date hygienic, sanitary and perfect institution of the kind on the Continent, if not in the World, and the Board has the gratitude of the great public at large, not only of Toronto and Canada generally, but of the Hospital Workers of the entire Country, who regard this as a model.

The drinking water supplied to patients is produced by the TRIPURE Sanitary Water-Still process, in use by the United States Government in their Army and Naval Hospitals and Departments, War Vessels, etc.

This water is distilled and tripley purified and oxygenized during vaporization, making it potable, palatable and delicious—really an artificial rain water—and is absolutely pure and sterile—so pronounced by the World's Congress on Hygiene and Demography.

TRIPURE Water will be frozen in Caraffes in the most up-to-date manner by a Kent Ice Machine, thence to be delivered at the bedside of individual patients.

The installation of these two standard plants in a building specially built and designed for them demonstrates the infinite attention to detail and convenience of operation which have been lavished upon the work for the comfort of the patients.

The Sanitary Water-Still has been adopted, as it is the only Water-Still which returns to the vapor all the oxygen removed in the boiling, thus doing away with the flat and insipid taste found in all other distilled waters. The cost of operation is practically nil and the space occupied—often a desideratum in compact work—is no more than required by an ordinary kitchen hot water tank, and requires no expert care or attention.

The Sanitary Water-Still Company of Canada, Limited, is prepared to figure on all hospital work and furnish apparatus producing from 125 gallons per 24 hours up to 10,000 gallons.

Address, 136 John St., Toronto, Ontario.

Telephone Adelaide 420.

Sanitary Water-Still Company of Canada, Ltd.

?

WATER PURIFICATION

*Why don't you call or
write us for particulars of
Pressure Filtration*

*Do so, you will find it
time well spent for muni-
cipal or industrial purposes*

**Bell Filtration Company
of Canada, Limited**
305 Kent Building, Toronto

TRAVEL TRAVEL TRAVEL AROUND THE WORLD

We have without a doubt the best value in
Canada, we can give you your choice of routes,
if you are going abroad give us a call, we can
book you by almost any steamship line you
may choose.

MAIN 7024

S. J. SHARP & CO.

19 ADELAIDE ST, EAST

TORONTO, CANADA

Give them Bovril

Because the Body Building Power of Bovril has been proved to be from 10 to 20 times the amount taken.

Hospital for Nervous Diseases —TORONTO—

PPRIVATE MEDICAL HOSPITAL,
devoted exclusively to the treatment
of Organic and Functional Diseases of
the Nervous System, especially Neuras-
thenia in its various forms.

NO INSANE NOR DRUG HABIT CASES RECEIVED FOR TREATMENT

For further particulars apply to CAMPBELL MEYERS, M.D.,
72 Heath Street, Toronto, Canada.

A NEW PRIVATE HOSPITAL FOR THE TREATMENT AND CARE OF ALCOHOLISM

and those addicted to Drug Habits, has been established at
622 Spadina Avenue, Toronto.

Correspondence Invited.

J. BRYCE McMURRICH, M.D.C.M., Medical Supt.

Phone College 186.



THE HIGH PARK

(TORONTO)

SANITARIUM

(Affiliated with Battle Creek Sanitarium)

CANADIAN EXPONENT OF THE

BATTLE CREEK SYSTEM

A most scientifically equipped private medical institution for the treatment of chronic cases

**Neurasthenia, Dyspepsia, Rheumatism,
Diabetes, Anemia, Obesity, Goitre,
Paralysis, Cardiac and Renal Diseases.**

Unexcelled facilities for the administration of Massage, Swedish Movements, Special Dietaries, Medical Electricity and Baths of all kinds, including the Electric Light Bath.

Beautifully located in extensive private grounds adjacent to 500 acres natural park.

Private water supply from artesian mineral spring.

An ideal place for the semi-invalid to recuperate health and strength, or for the office worker to spend a profitable vacation.

For rates and descriptive literature address:

W. J. McCORMICK, M. D., Supt.

32 Gothic Avenue, Toronto. Telephone Jct. 444.

INCINERATORS

For cities, or towns of any size, also for use in hospitals, hotels, or large camps.

High Temperature System Utilized.

Garbage Burned without Fuel except the garbage itself.

Steam for power purposes, generated from the waste gases.

Plants erected by

MESSRS. HEENAN & FROUDE of CANADA, LTD.

LAURIE & LAMB, Managers

211-212 Board of Trade Building MONTREAL

THE SANITARY RECORD and MUNICIPAL ENGINEERING.

37th Year of Publication.

**EVERY CANADIAN HEALTH
OFFICER AND SURVEYOR
SHOULD BECOME A SUB-
SCRIBER.**

Published Weekly. Annual Subscription for Canada, \$4.14, Post Free, including Handsome Cloth Bound Year Book, Diary and Blotter of 200 pages.

"THE SANITARY RECORD" is the Oldest and Leading organ in Great Britain devoted to Public Health, and contains the latest and best information of English practice on :-

**WATER SUPPLY AND SEWERAGE,
HOUSING AND TOWN PLANNING,
ROAD CONSTRUCTION AND MAINTENANCE,
LIGHTING, HEATING AND VENTILATING,
PUBLIC HEALTH ADMINISTRATION,
MUNICIPAL ENGINEERING AND SURVEYING,
NOTES AND QUERIES, etc., etc.**

Specimen Copy and Advertising Tariff free on application.

Head Offices: 55-56 Chancery Lane, London, W.C., Eng.

These trade-mark crisscross lines on every package

**SPECIAL DIETETIC
FOOD**

**RECOMMENDED BY PHYSICIANS FOR
KIDNEY AND LIVER TROUBLES
REQUIRE RATHER STRICT DIET**

Unlike other goods ask your physician.
Leading grocers. For home or sample, write
FARWELL & RHINES, Watertown, N. Y., U. S. A.

WITHROW TOURS

Established by the Rev. W. H. Withrow, D.D., F.R.S.C.

Continued by Miss Florence Withrow, B.A.

24th Withrow Party for 1914

12th through Europe for Miss Withrow
3rd through Egypt and Palestine

In Cherry-blossom and Wistaria Time

JAPAN

Via San Francisco and Honolulu

Return by Canadian Rockies

Mongolia (27,000 tons) March 5th, from San Francisco

Empress of Russia (16,850 tons) May 23, arrive Vancouver

No Better Steamers Sail the Pacific Ocean.

Full Inclusive Price	-	-	\$875
Extension to China	-	-	\$180

"Drift to Paradise on an Even Keel in Pacific Waters"

For full information address

40 Hampton Court, Avenue Road, Toronto. Phone. N. 7610

Annual Summer Tour

Best of Europe, leaves June next
Applications already received

The Original Vacuum Carpet Sweeper

SWEeper-VAC.

Simple in Construction, Durable, Efficient, Fully Guaranteed, Absolutely Sanitary, Endorsed and Recommended by Physicians.

The SWEEPER-VAC is a vacuum cleaner that runs over the carpet in exactly the same way as the old-time carpet sweeper, and it is of about the same shape.

It removes dirt by the vacuum process and is much more powerful as a cleaner. It never causes dust in the air of the room and it cannot spill dirt on the carpet. It never has to be oiled, and is simplicity itself to empty. It freshens your carpets and rugs with the AIR cleaning and will last twenty years.

The SWEEPER-VAC is guaranteed to take dust from the floor through a carpet or a loosely woven rug. No electricity is necessary. The suction is produced by the continual working of our special bellows, operated by a clever mechanism attached to the SWEEPER-VAC wheel. The moment the Wheel revolves over the floor, the suction begins, whichever way the SWEEPER-VAC is moved.

DESCRIPTION OF SWEEPER-VAC, MODEL "S"

The name "SWEEPER-VAC" tells what the machine is; a combination of carpet sweeper and vacuum cleaner. The SWEEPER-VAC combination includes two machines, each complete in itself.

Although the carpet sweeper and the vacuum cleaner can each be used independently, they will generally be used in combination.

The carpet sweeper is small enough to rest under the vacuum cleaner so that both glide along at the same time, each doing its own thorough work. The vacuum cleaner, by its suction, will remove from a cupful to a quart of solid dirt from any large rug in two minutes, after it has been beaten or otherwise cleaned. The little carpet sweeper at the same time with its specially constructed brush will pick up all threads, lint and hair.

Although the carpet sweeper is small, it is the most efficient that money can buy. We guarantee that this remarkable SWEEPER-VAC combination will do more thorough work than many electric machines selling at ten times its price.

One Physician Writes:

Your SWEEPER-VAC I find is MARVELLOUS in its efficiency to remove dirt and being PERFECTLY DUSTLESS in its operation is of great SANITARY ADVANTAGE. It must be seen in operation to be fully appreciated. The machine recommends itself.

Another Physician Writes:

We have been using the SWEEPER-VAC machine for some considerable time in our home and find it EXCEEDINGLY SATISFACTORY. It really takes up ALL the DIRT, AND DUST in a carpet and entirely WITHOUT CAUSING DUST IN THE AIR of the room. It is easily handled and the mechanism is very simple and will not readily get out of repair.

A Lady Physician Writes:

It gives me much pleasure to thoroughly endorse all that is claimed for the SWEEPER-VAC having had one in use for several months. IT CREATES NO DUST IN USING and is SURPRISING TO A GOOD HOUSEKEEPER what it removes.

Our Claims Prove Nothing, a Trial Proves Our Claims,

Write "Sweeper-Vac" on a postal with your address—MENTIONING THE PUBLIC HEALTH JOURNAL. We will do the rest.

RELIABLE AGENTS WANTED

DOMINION SALES COMPANY
TORONTO ARCADE TORONTO



THREE
IN
ONE
MODEL
"S"

The Original Vacuum Carpet Sweeper

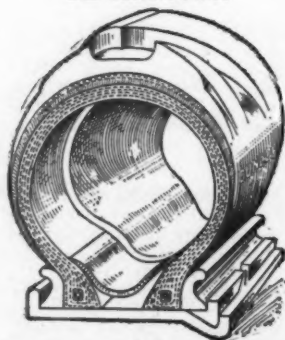


AVOIDING MOTOR RISKS

No one motorist has a corner on risk. Dunlop Traction Treads are mighty good to have around to enable you to fight clear of your share.

Dunlop Traction Tread
Straight Side
Our Patented Tire

66
inches
larger



Never
did
rim-cut

Most Envied Tire in all America

UNIVERSITY OF TORONTO

FACULTY OF ARTS.

Instruction in the courses leading to the degree of B.A., M.A., and Ph.D. is given in the University, University College, Victoria College and Trinity College.

The Colleges provide instruction in the Classical, Modern and Semitic Languages and Literature, Ancient History and Ethics. The University gives training in the remaining subjects of the curriculum.

FACULTY OF MEDICINE.

Complete courses of instruction with ample opportunities for clinical training at the General Hospital, St. Michael's Hospital, Hospital for Sick Children, leading to M.D. and D.P.H.

FACULTY OF APPLIED SCIENCE.

Courses in Civil, Mining, Mechanical, Electrical and Chemical Engineering; Architecture and Applied Chemistry leading to the Degree of B.A.Sc.

FACULTY OF HOUSEHOLD SCIENCE.

Courses for normal and occasional students.

FACULTY OF EDUCATION.

Professional training for Public School, High School and Inspector's certificates.

FACULTY OF FORESTRY.

Courses leading to the diploma and the degree.

AFFILIATED INSTITUTIONS.

The affiliated Colleges and Schools train candidates for University standing in Dentistry, Pharmacy, Agriculture, Music, and Veterinary Science.

For information apply to the Registrar of the University, or to the Secretaries of the respective Faculties, Toronto, Ont.

Everything IN Music

Pianos, Sheet Music, Music Books, Violins,
Banjos, Guitars, Strings, Etc.

The most complete music house in Canada.

The BELL PIANO WAREROOMS
146 YONGE STREET

THE BEST CURE

is often to get out on the land. ONTARIO LANDS offer both prosperity and health to those who desire to take advantage of the opportunities afforded. In old Ontario there are fruit lands, vegetable lands and mixed farming lands available at reasonable prices which offer prospect of advancement in value within the next few years in addition to the value of the annual returns. They also include many of the conveniences of modern life, as well as the beauties of nature.

In New Ontario there are lands available in some places for nothing and in others at a nominal price of fifty cents per acre, which are capable of producing almost all kinds of crops, and which constitute one of the best chances at the present time for the settler who desires to take up cheap lands.

Further information will be supplied on application to

HON. J. S. DUFF,
Minister of Agriculture,

Parliament Buildings,
TORONTO.

H. A. MACDONELL,
Director of Colonization,

Parliament Buildings,
TORONTO.

The following circular is Printed on a card and will be sent to those making application for same:

HOW TO DEAL WITH THE FLY NUISANCE

House flies are now recognized as MOST SERIOUS CARRIERS OF THE GERMS OF CERTAIN DISEASES such as typhoid fever, tuberculosis, infantile diarrhoea, etc.

They infect themselves in filth and decaying substances, and by carrying the germs on their legs and bodies they pollute food, especially milk, with the germs of these and other diseases and of decay.

NO FLY IS FREE FROM GERMS

THE BEST METHOD IS TO PREVENT THEIR BREEDING.

House flies breed in decaying or decomposing vegetable and animal matter and excrement. THEY BREED CHIEFLY IN STABLE REFUSE. In cities this should be stored in dark fly-proof chambers or receptacles, and it should be REGULARLY REMOVED WITHIN SIX DAYS in the summer. Farm-yard manure should be regularly removed within the same time and either spread on the fields or stored at a distance of not less than quarter of a mile, the further the better, from a house or dwelling.

House flies breed in such decaying and fermenting matter as kitchen refuse and garbage. Garbage receptacles should be kept tightly covered.

ALL SUCH REFUSE SHOULD BE BURNT OR BURIED within a few days, BUT AT ONCE IF POSSIBLE. NO REFUSE SHOULD BE LEFT EXPOSED. If it cannot be disposed of at once it should be sprinkled with chloride of lime.

FLIES IN HOUSES.

Windows and doors should be properly screened, especially those of the dining-room and kitchen. Milk and other food should be screened in the summer by covering it with muslin; fruit should be covered also.

Where they are used, especially in public places as hotels, etc., spittoons should be kept clean as there is very great danger of flies carrying the germs of consumption from unclean spittoons.

Flies should not be allowed to have access to the sick room, especially in the case of infectious disease.

The faces of babies should be carefully screened with muslin.

FLIES MAY BE KILLED by means of a weak solution of formalin (40 per cent.) exposed in saucers in the rooms. This is made by adding a teaspoonful of formalin to a pint of water. The burning of pyrethrum in a room is also effective.

House flies indicate the presence of filth in the neighborhood or insanitary conditions.

**ENTOMOLOGICAL DIVISION, CENTRAL EXPERIMENTAL FARM, OTTAWA
DEPARTMENT OF AGRICULTURE, CANADA.**

(Published by direction of the Minister of Agriculture.)

The
Book

Prescribe
Medicines
Intelligently

Propaganda for Reform in Proprietary Medicines

Explains how an injustice is done the physician and patient by prescribing unstable, inefficient and frequently fraudulent proprietary medicinal products.

READ this book and you will realize the danger which the physician encounters by prescribing proprietary products of unknown composition.

ANALYZE its contents and you will understand why the physician must be cautious so as not to be deceived by vague and mysterious statements regarding unknown proprietary remedies.

REVISED AND GREATLY ENLARGED
375 pages. 101 Illustrations. Cloth. Price, \$1.00

American Medical Association

536 North Dearborn Street

CHICAGO, ILL.

T. & N. O. Railway Train Service

Through trains daily between Toronto and Englehart, operating cafe parlor and Pullman services.

Daily services between North Bay and Cochrane, operating C. P. R. sleeper, running direct to and from Montreal.

Local service for Charlton connecting with trains 1 and 2, also 46 and 47

At Iroquois Falls connecting with trains 1 and 2 for Porcupine.

For full particulars of running time or further information apply to any T. & N. O. Railway Agent.

A. J. PARR

Frt. and Pass. Agt.

North Bay.

PROVINCE OF ONTARIO



Department of Education

Official Calendar

December:

1. Last day for appointment of School Auditors by Public and Separate School Trustees. (On or before 1st December.) Township Clerk to furnish to the School Inspector information of average assessment, etc., of each School Section. (On or before 1st December.) Legislative grant payable to Trustees of Rural Public and Separate Schools in Districts, second instalment. (On or before 1st December.)
8. Model School Final Examination begins.
9. Returning officers named by resolution of Public School Board. (Before 2nd Wednesday in December.) Last day for Public and Separate School Trustees to fix places for nomination of Trustees. (Before 2nd Wednesday in December.)
12. Model Schools close. [Model School Syllabus.]
13. Local assessment to be paid Separate School Trustees. (Not later than 14th December.)
15. County Council to pay \$500 to High School and Continuation School where Agricultural Department is established. (On or before 15th December.) Municipal Councils to pay Municipal Grants to High School Boards. (On or before 15th December.)
19. Normal Schools (first term) close. [Normal School syllabus.]
22. High, Continuation, Public and Separate Schools close. (End 22nd December.)
25. Christ Day (Thursday). New Schools, alterations of School boundaries and consolidated Schools go into operation or take effect. (Not to take effect before 25th December.)
31. Annual meetings of supporters of Public and Separate Schools. (Last Wednesday in December.) High School Treasurers to receive all moneys collected for permanent improvements. (On or before 31st December.) Protestant Separate School Trustees to transmit to County Inspectors names and attendance during the last preceding six months. (On or before 31st December.) Auditors' Reports of cities, towns and incorporated villages to be published by Trustees. (At end of year.) Financial statement report of attendance, etc., from Teachers' Institutes. Cir. No. 12. (Not later than 31st December.) Report on Inspectoral visits from Separate, County, and District Inspectors, due. [Instructions, 16, 16a, 16b.] (Not later than Dec. 31st.)

ADVERTISING AGENCIES

A. McKIM, Limited

Newspapers, Magazines, Bill Boards

Lake of the Woods Building, MONTREAL.
103 Bay Street, TORONTO.

The Desharats Advertising Agency, Limited

MONTREAL and TORONTO

20 years experience in conducting Canadian Advertising Campaigns.

Gagnier Advertising Service

Saturday Night Building,
Toronto

Canada's Advertising Publications

We will Select the BEST for Your Advertisements

THE MASON ADVERTISING AGENCY

Toronto's Oldest Agency - Toronto, Canada

THIS agency has never lost a "patient" and has in its charge a number of healthy and growing accounts.

Baker Advertising Co

26 Adelaide St. W., TORONTO.

J. J. GIBBONS, Limited

ADVERTISING

Toronto - Montreal - Winnipeg

ADVERTISING PAYS

When properly written, displayed and placed.
Our up-to-date service is at your disposal.
Full information given without obligation on your part.
Efficient ad-writing and art departments at your service.
Write, call or phone Main 4745.

WOODS NORRIS LIMITED, - Advertising Agency
Mail Building - - Toronto

J. WALTER THOMPSON CO. LTD.

Lumsden Building, Toronto

also at

New York, Chicago, Boston, Cleveland,
Detroit, Cincinnati, St. Louis, and London, Eng.

A MEDIUM WORTHY OF YOUR ATTENTION

IS 

The Public Health Journal
ORGAN
OF VOLUNTARY AND
OFFICIAL HEALTH ADMINISTRATION
LUMSDEN BUILDING
TORONTO - - CANADA

[Largest circulation in the public health field; world-wide in its influence.—Write for terms.]

CANADIAN PACIFIC

WHEN YOU TRAVEL

Travel in Comfort

The Canadian Pacific offers to the travelling Public, service and equipment second to none. They build, own, and operate their Compartment Observation Cars, Standard Sleepers, Dining Cars, Coaches and Motive Power.

The Canadian Pacific own and operate a line of palatial hotels along the Railway from Atlantic to Pacific, thus affording their patrons every possible comfort.

The Canadian Pacific can ticket you around the World, and enable you to travel over two thirds of the World's journey, on their own trains and steamers.

Those contemplating a trip will receive full details and literature from any C.P.R. Agent, or write,

M. G. MURPHY

District Passenger Agent,

TORONTO

WHETHER YOU ARE SAILING

On Business,

For Pleasure,

Or in Search of Health,

Take the "Royal" Road to Europe

Montreal Quebec Bristol
(Via St. Lawrence Route)

R.M.S.

"Royal Edward"

R.M.S.

"Royal George"

MONTREAL

Saturday, Aug. 23
Saturday, Sept. 6
Saturday, Sept. 20

SAILINGS

STEAMER

Royal George
Royal Edward
Royal George

BRISTOL

Saturday, Sept. 6
Saturday, Sept. 20
Saturday, Oct. 4

Triple Screw Turbine and Modern Equipment
MEAN SPEED FOR THE BUSINESS MAN.

*Luxurious Saloons, Comfortable Cabins and Spacious
Decks*

OFFER ENJOYMENT TO THE TOURIST.

*Absence of Vibration, Thorough Ventilation, and per-
fect Cuisine*

ENSURE HEALTH to the CONVALESCENT.

For Tickets and all information apply to any Steamship Agent or to the
following offices of the Company :

52 King St. E., Toronto, Ont.
254 Union Station, Winnipeg, Man.

226 St. James St., Montreal, Que.
123 Hollis St., Halifax, N.S.





CHATEAU LAURIER



**GRAND
TRUNK
RAILWAY
SYSTEM**

**THE NEW \$2,000,000.00 HOTEL
SITUATED IN THE HEART OF THE
DOMINION CAPITAL.**

Accommodation 350 rooms.

Furnished with exquisite taste and comfort.

The latest in hotel construction.

Rates \$2⁰⁰ upwards. European plan.

Write for handsome illustrated descriptive literature.

**F.W.BERGMAN,
MANAGER**

GOD'S CHRISTMAS GIFT.

OSWALD C. J. WITHROW

All down the ages God had nursed a plan,
Till from the dazzling brightness of His throne
He flung a radiance hitherto unknown.
Effulgent glory domiciled with man.

Man stumbled blindly in the blackest night,
Bleeding and bruised he paid the price of sin.
The world's sad wail rose heavenward, to win
Perchance some comfort in the desperate fight.

Into this blackness Jesus came, a child.
Heralds of angels sped him on His way.
God's plan fulfilled, there dawned a brighter day.
Jehovah sent His Christmas gift, and smiled.

THE PRESIDENT
THE ACADEMY OF MEDICINE, TORONTO



HERBERT J. HAMILTON, M.D.C.M., M.B., L.R.C.P. (Lond.)

The Public Health Journal

The Official Organ of The Canadian Public Health Association.

VOL. IV

TORONTO, CANADA, DECEMBER, 1913

No. 12

Special Articles

IMMIGRATION AND ITS EFFECTS UPON THE PUBLIC HEALTH

By P. H. BRYCE, M.D.

Superintendent of Immigration, Ottawa.

Read before the Third Congress of the Canadian Public Health Association, Regina, Sask.

So far as the present generation of Canadians is concerned it may be said that their knowledge of the foreign immigrant is limited to the past fifteen years. If one went from Halifax to Vancouver before that time he experienced no essential difference in the physical appearance, language or modes of thought of the population of the English-speaking provinces; but if he thought of it at all he felt that he was but a unit in a homogeneous population, separated it is true by hundreds and thousands of miles, but except for climatic differences or geographical location, a people with common ideals and with an outlook upon life, narrow or less so according to the accident of birth, opportunity or environment. With a country whose productive area embraces more than one million square miles it was inevitable, however, following the example of the neighboring Anglo-Saxon Republic more favored climatically for easy and early development, that Canadians should if they were to fulfil their destiny break the narrow limitations of their first hundred years' history, take up the white man's burden and effectively

occupy their magnificent heritage. The accident of circumstance through the occupation of the northern half of the whole continent and the heroism of Canada's first European occupants, whether the French of the old regime as discoverers or missionaries of the Cross, whether the soldiers of His Britannic Majesty or United Empire Loyalists, or, greatest of all, the hardy British peasantry who settled on her shores, subdued the forests and made the wilderness and solitary places glad and the desert to blossom as the rose, had made all this possible for us their descendants. But measuring the future by past accomplishments the five million Canadians in 1900 might well have asked themselves like the prophet of old, Who shall be sufficient for these things?

It was plain that more men, more money, more railways and more diversified industries would all be necessary if effective occupation was to be at all possible. Where were such to be obtained? The drain on European populations had gone on for a century and naturally had been of emigrants from the more progressive countries

whose people became conscious of their own congested populations, the limitations of peoples cramped by the customs and traditions of a thousand years of feudalism and eager to seize the opportunities of a new world of limitless possibilities. Britain had lost her millions to the United States, Germany had experienced in the middle half of the last century a similar drain on her rural population, as did also all Scandinavian countries till 1880, when the surplus seemed largely to have become exhausted. But still the empty lands of the northwestern and western prairies and mountains cried out for cultivators, and the transportation agencies perforce turned to races of other ethnic types, but of a less advanced civilization. Since 1880, especially the Slavic races from southeastern Europe and the Latin peoples from the south, have maintained a steady stream to supply the demands of a developing agriculture and growing industrialism, which have not yet reached their limits. What is meant may be realized when to the twelve North Central States between 1880 and 1890 there was an immigration of 1,143,285, which unfortunately included two hundred thousand Canadians. But it is apparent that there was some approaching limit to the area of the lands in the United States of easy and profitable occupation, and it is due in large measure to the foresight and energy of one Eastern Canadian who had become for many years a resident in Western Canada that the tide of emigration from Europe and, indeed, from the United States at length began to flow through another channel and the sturdy peasantry of Austrian Poland, of Russia and of Finland began to come in thousands through Canadian gateways, these going especially to the Northwest.

The country was hungry for men, but the inexperienced Canadian of the West looked askance at the sheep-skinned newcomers, and even doubted the expediency of the influx of the American farmer from neighboring States. Now, however, governmental energy guided the influx which soon was to become a flood, and, stimulated by blood affiliations, the desire for immigrants, more akin to ourselves in manner and in habits of thought, and by political considerations, the Executive

entered upon a campaign of immigration which culminated last year in 152,000 persons from the British Isles alone. When it is realized that from 1901 to 1911 the population of Canada increased over 1,700,000, or by 23 per cent., that in 1912-13, some 402,432 more were added and that up to July 1st, 1913, there have been 210,201, it will be understood what a burden of nation-making the Canadians of the twentieth century have taken upon themselves and how each in his own place and opportunity has or ought to have, recognized a patriotic duty in attempting to leaven the incoming mass with the ideals of Canadian citizenship. Measured by national economic development the results have been stupendous; gauged by the effects upon the social fabric of the Canadian people some characteristics almost equally marked have also been developed. Who could have dreamed that, whether in Eastern industrial centres or Western areas of development, within a dozen years thousands of individuals seizing the magic wand of opportunity should have touched the mystic stone of the treasure-house of King Rhampsinitos and have carried therefrom their hundreds of thousands and even millions of dollars, who before had been delving like the mason's sons, for their daily bread. A cynic may, perhaps, be excused, seeing all this, for suggesting that Jupiter had once more become jealous of the care which Prometheus has of the race of men and, clothing his gift in the image of a fair woman, has through Pandora taken the lid off the great cask, whence may issue at least industrial strife and war, plague and sickness, and grief and sorrow.

It cannot be supposed, however, that the introduction of a new population into Canada within a single year, equal to one-sixteenth of the present total population, from at least half a dozen countries, differing in ethical status, as well as in language and physical constitution, can take place without their producing definite centres from which emanate influences more or less positive for good or ill. We trust that there is in our present population of Canadians so large an element of moral elevation that in the ratio of sixteen to one it may result rather in raising the status of the new-comer than that

IMMIGRATION AND PUBLIC HEALTH

643

the latter should lower that of our own people. In the sphere of physical disease it is not supposable, however, that individuals, the products commonly of the industrialism of over a century in England

with its degenerating influences in towns, should not here and there find their entrance to our portals. That such is the case may be judged from the following table of deportations by causes and by nationalities:

DEPORTATIONS, AFTER HAVING BEEN ADMITTED, BY CAUSES, FROM DECEMBER, 1902, TO MARCH 31, 1913.

	9 mos. 1902-1903-1904-1905-end 1903 1904 1905 1906 Mar. 31, 1907					Fiscal Year.							
	1903	1904	1905	1906	Mar. 31, 1907	1907- 1908.	1908- 1909.	1909- 1910.	1910- 1911.	1911- 1912.	1912- 1913.	Totals.	
Abscess.					2	1	2	2	3			12	
Accompanying patients	4	3	1	4	35	26	21		18	17	16	145	
Alcoholism.					2	2	27		9	6		50	
Anaemia.							1				2	3	
Arteritis cerebral									1			1	
Asthma.		1							2		3	7	
Bad Character								9				19	
Blindness.				1		2	3			2		8	
Bright's disease						2	3				3	8	
Bronchitis		1	1			3	1				1	7	
Cancer.		1		1			2		1	2	2	9	
Cataract.						1	1					2	
Catarrh.									1			1	
Chronic dysentery	1	2	1	1	1							6	
Chronic skin disease.										1		1	
Criminality.		1	8	1	12	65	115	130	172	242	334	1083	
Crippled.		4	4	8	4	4	11			2		37	
Curvature of spine.						1	1					4	
Cystitis.	1	1		1	2	1	4	1				8	
Deafness.						2						6	
Defective sight		1	1			5	11					28	
Diabetes.				1			2					3	
Diseased leg											1	1	
Dislocations.	2					1						3	
Drug habit						1						1	
Eczema.							1	6			1	8	
Epilepsy.	6	4	2	6	6	15	22	8	10	10	8	97	
Fistula.						1	1					2	
General debility	7	8	7	18		60	97	27	1	1		226	
Haemoptysis.	1	1										2	
Heart disease	2	1	3	7	3	5	13	4	3	3	9	53	
Hemiplegia.											1	1	
Hemorrhoids.	1											1	
Hernia.			2	3					2	1		16	
Hip disease							1					2	
Idiocy.	1							2				7	
Imbecility.		1	1	1	2	2	35	1				43	
Immorality.										24	38	62	
Injured.						7	6	1				14	
Insanity.	1	5	5	12	53	110	113	95	121	133	220	868	
Insomnia.						1		1				3	
Kidney disease							1			2		3	
Leprosy.											3	3	
Malaria.						1		2				3	
Melancholia.											1	1	
Mental weakness	7	8	2	17	20	43	1	9	17	9	10	143	
Muscular atrophy				1				2				3	
Nephritis.											1	1	
Neurasthenia.	1			1						1		2	
Nostalgia.							1		1			2	
Osteoarthritis.												1	
Paralysis.		3	1	7		5	5	3	2	1	6	33	
Pleurisy.	1	1										2	
Poisoning (lead)				1								1	
Poor physique											9	9	
Pott's disease							2					2	
Pregnancy.						1		3	2	2		8	
Procuring.											5	5	
Prostitution.		1		2		8	8	6	10	9	15	59	
Public charge	14	19	19	18	28	309	1074	348	289	343	392	2853	
Rheumatism.	8	7	6	11	10	29	15	8	2	7	12	115	
Sclerosis.				1								1	
Senility.							10	3	1			23	
Trachoma.			2			1	1	2	8			15	
Tuberculosis.	8	8	13	6	13	67	54	30	33	39	61	332	
Ulcers.											3	3	
Vagraney.						21	56	29	61	84	107	360	
Varicose veins	1	1		3	2	5	6			2	1	21	
Veneral disease		1	1			4	4	2	2	2	1	17	
Violation of Imm. Act									12	8	4	24	
Totals.	67	85	86	137	201	825	1748	734	784	959	1281	6907	

DEPORTATIONS, AFTER HAVING BEEN ADMITTED, BY NATIONALITIES, FROM DECEMBER, 1902, TO MARCH 31, 1913.

	9 mos.					Fiscal Year.						
	1902-1903	1903-1904	1904-1905	1905-1906	1906-Mar. 31, 1907	1907-1908.	1908-1909.	1909-1910.	1910-1911.	1911-1912.	1912-1913.	Totals.
African, South							1			1		2
Australian						1	1	4	1			9
Austrian, N.E.S.		1				4	17	4	10	21	30	87
Bohemian							3	1		1	2	7
Bukowinian			1			5	4		3	1	1	15
Galician	1		1	4	4	15	16	11	10	6	9	77
Hungarian, N.E.S.				1	1	3	1				5	11
Ruthenian							1	6	5	11	7	30
Slovak									1			1
Belgian				1	2		2	8		6	4	29
Bulgarian						65	74				2	141
Chinese		1			1	1	1	1	2	6	16	29
Dutch						10	12	3	2	1	13	41
French			1	1	3	4	18	3	2	1	26	98
German					1	8	7	11	12	22	26	98
English	43	58	61	98	130	513	1081	355	342	406	387	3474
Welsh		1	2	3	2	2	1	5	3	4	7	30
Scotch	7	8	9	8	25	61	119	89	90	89	118	624
Irish		2	2	3	10	31	34	37	23	41	47	230
West Indian							1	1	6	3	26	39
Jamaican				1			1					2
Greek							32		11	2		49
Hebrew, N.E.S.			1	8	2	2	32	2	3		5	55
Russian				1	2	6	11	1	5	2	5	33
Polish						1		1			1	3
Austrian							2		1		5	8
Italian	1	4	1		1	13	13	15	13	12	17	90
Japanese							4	1	1	1		7
Newfoundland								8		3	5	16
New Zealand											1	1
Polish, N.E.S.				1	1	8		2	3	1	8	24
German								1			1	2
Russian						1	3	1		1	12	19
Austrian								1		6	2	9
Roumanian	1	1				2	42	3	2	4	4	59
Russian, N.E.S.					1	9	49	5	5	16	29	114
Finnish		4	1			2	3	4	4	3	14	35
Spanish							1			2	1	4
Swiss							2	2	1	1	12	18
Servian									7		1	8
Danish		2	2	2	1	6	4	2	3	2	5	29
Icelandic	3				1			1				5
Swedish	3	1	2	1	4	9	7	6	8	12	20	73
Norwegian	8	2	1	1	1	4	2	3	12	5	21	60
Turkish, N.E.S.							20			1	2	23
Armenian								1		1	1	3
Syrian							1	1	7	1		11
U.S.A. citizens				2	8	37	98	119	169	256	377	1066
Negro						1						2
Hindoo							24	1	1	2	1	29
Maltese											1	1
Montenegrin											2	2
Totals	67	85	86	137	201	825	1748	734	784	959	1281	6907

Whether or not the totals be more than they might or should be, if more extended and exact inspection methods were adopted first in the country of deportation, second on shipboard, and, last, at ports of entry, is not for me to discuss here; but it will be of interest to us to analyze what the figures contain. It will be recalled by some present that I published in 1909 the results of an extended study of all the insane who had been received into the asylums of the Northwest in the nine years from 1900-1908. A study of these was made more complete as there had been a population census taken in 1906. In the study I find the following:

"What is worthy of remark in these tables is the relatively low rate of native Canadians and Americans." "However, it has been remarked by others, as well as myself, that the Teutonic peoples, both German and Scandinavian, have in America a relatively high number of insane." "What further is equally notable is that the Slav races, whether native Russians or Galicians, Poles, etc., have year in and year out, a remarkably low percentage of insane and the same may be said especially of the Italians."

Since these words were written giving us the figures of the preceding paper another quinquennium has passed and the

following table will be of further interest taken from my annual report for 1912-13:

A casual examination of the table shows at once the continuance of much the same ratio in the deportations per one thousand admitted as in the previous period. In the instance of nationalities, where only a few hundred or thousand immigrants are admitted, any conclusions drawn from the statistics of a single year might be quite misleading. However, the essential facts are before us. The total immigrants in 1912-13 were 402,432. The total deportations were 1,281 for all causes, thus:

Total deportations in fiscal year 1912-13:

All causes	1,281
Disease	408
Crime	334
Public charge	392
Other causes	147

Summed up, we find that of the 402,432 arrivals this year, 756 were rejected at ports of entry, of which 423 were due to causes other than disease and 333 on account of disease; while 1,281 were deported during the year of which 408 only were on account of disease. It would appear from these figures that with all the activi-

Table showing the deportations from Canada during the fiscal year 1912-1913 due to Insanity and Tuberculosis:

Number of Insane.		Number of Tuberculosis.	
Total.	Rate per 1,000 admitted.	Total.	Rate per 1,000.
69	0.6	English and Welsh....	29 0.2
26	0.8	Scotch.	5 0.1
5	0.5	Irish	2 0.2
43	0.3	United States	1 ..
6	1.5	German	1 ..
5	2.0	French	1 ..
9	0.4	Swedish	1 ..
3	0.4	Danish	1 ..
6	0.3	Norwegian	1 ..
11	0.7	Austrian	3 0.1
4	0.2	Russian	2 ..
4	0.4	Pole	0 ..
10	1.4	Hebrew	1 ..
2	1.0	Finnish	0 ..
5	0.3	Italian	3 ..
1	1.5	Belgian	1 ..
1	1.7	Dutch	0 ..
1	0.2	Bulgarian	0 ..
1	..	Montenegrin	1 ..
1	..	Newfoundland	0 ..
2	..	West Indian	1 ..
1	..	New Zealand	0 ..
1	..	East Indian	0 ..
2	0.2	Chinese	4 ..
0	..	Swiss	1 ..
0	..	Greek	2 ..
0	..	Turk	1 ..
219		62	

ties of port officers, of the several thousand Medical Health Officers, and of hundreds of hospital, asylum and charity officials, the immigrants have stood the test during the year, which resulted in finding cases either for rejection or deportation which amounted to only 1.7 per 1,000, or of but one deport in every one thousand immigrants on account of disease. When we recall that the death rate in Canada from tuberculosis, for many years prior to our present expansion of immigration, was from 1.5 to 2.0 per 1,000, we will understand the meaning of the fate of 402,432 immigrants during a year, when only a total of 62, or one in every 6,500, was deported on account of this disease. As regards the rate of deportations on account of insanity, we find it to be about 0.5 per 1,000, and are at once both gratified and distressed at these figures. We are gratified in knowing that we have in Canada machinery so well organized that every unfortunate immigrant who within a period of three years from his admission to Canada, has become a victim of this disease is in practice at once returned to his friends or parish, and we are distressed on the other hand to feel that so large a number as 219 persons in a total of about 400,000 should yearly be added to the list of inmates of the asylums somewhere. What is further notable is that this ratio of deportations on account of insanity is distinctly increased over that of the admissions to the asylums of the Northwest during the period 1900-1908, which was only 0.27 per 1,000, as compared with the rate last year of practically 0.5 per 1,000, which is equal to the annual admissions per thousand in recent years to the asylums of Great Britain.

It cannot, however, be wholly satisfactory to us to say that we have deported all persons of unsound mind, since we find on analyzing the type of insanity that most of these cases suffered from dementia praecox, the term to-day so widely applied to the insanity of adolescents and young adults and which expresses that unbalanced mind, the outgrowth of the degeneracy peculiarly the result of modern urban and social conditions in so-called civilized countries.

Another not unimportant lesson taught by these figures is that those conditions,

which find their expression in them are becoming, I regret to say, increasingly operative in Canada to-day where our urban population increased 62.5 per cent. during the last census period. The social forces at work in every Province, in every city tending toward physical, mental and moral degeneration, are evident to every Health Officer, and I can conceive no more important part of his duties than for him to become an apostle of sanity in living, basing his appeals to his people upon the statistics of their own Province or city.

For years I have urged that the Medical Officer of Health is in a position of peculiar advantage, not occupied by any other citizen, of being able through his personal knowledge to draw the attention of the public to social, industrial and economic conditions inimical to the best interests of the community as illustrated by sickness and death statistics; and in no other way can he perform a larger public duty than to point out the duty of the individual citizen to the immigrant who comes to Canada because his services are required. He comes a stranger to our language often, to our laws, to our customs, and to our traditions. For these defects he surely cannot be blamed; and it would seem the first duty of a common Christianity and of even an enlightened selfishness on the part of every Canadian to interest himself in lessening or removing these handicaps from the immigrant since he will either become a lowering element in the ethical status of our people or else he must be raised to ours. For us the delightful side in the exercise of charity towards the immigrant is that illustrated by Shakespeare:

"The quality of mercy is not strain'd,

It is twice bless'd,

It blesseth him that gives and him that takes."

Fortunately, the needs of the immigrant in his relations to society have aroused our people in Canada, as in the United States, to a splendid development of social energy. One is surprised sometimes in reading accounts of public meetings, as where resolutions are passed at church conferences expressive of alarm regarding the effect of the foreign immi-

grant upon the social fabric in Canada; whereas to the ordinary layman there seemingly should be expressions of delight instead that the gentile or heathen as strangers within our gates should come to us for light and leading instead of our having to send the evangel to him in his own country.

Of one thing I am perfectly assured, viz.: That the best Christian activities of the people in all our cities and communi-

ties have been aroused in a marked degree during the last ten years; and that never in Canada's history have there been as many elevating agencies at work, which if wisely directed, will certainly and gradually mould into a composite and harmonious whole the millions from all the ends of the earth, which that Divine Providence who has given us this great heritage has placed within our kindly keeping.

THE DESPAIRING MIND

Despondency.

Diagnosis—

Mournful ideas predominate in every thought. . . . An habitual sadness seizes upon the soul, and the faculties are chained to a single object, which can never be contemplated but with hopeless uneasiness.—Dr. Johnson.

Remedy—

Let him who gropes painfully in darkness or uncertain light, and prays vehemently that the dawn may ripen into day, lay this precept well to heart: "Do the duty which lies nearest thee, which thou knowest to be a duty! Thy second duty will already have become clearer."—Carlyle.

PREVENTIVE MEDICINE AND THE FAMILY DOCTOR

By ADAM H. WRIGHT, B.A., M.D., M.R.C.S., Eng.

Chairman, Provincial Board of Health, Ontario.

Read before the Third Congress of the Canadian Public Health Association, Regina, Sask.

We are told that the general practitioner has disappeared, and that this is the period of specialists. While we may think that the first part of this statement is not correct, we have to acknowledge that a process of evolution is taking place with respect to the specialist and the family doctor. The growing importance of specialism is so generally recognized that the needs of the general practitioner are now being overlooked in certain quarters. Surely we should not ignore the fact that over ninety per cent. of the doctors in North America and Great Britain are general practitioners. This ratio is likely to continue for many years to come, probably for ever.

Many of us think, therefore, that the family doctor in the near future will become as important a member of the profession as the most scientific specialist. We believe, however, that the general practitioner and the specialist will work together and thus accomplish the greatest possible good in the interests of suffering humanity. Let us consider the family doctor from the standpoint of preventive medicine.

In speaking of preventive measures in routine general practice, it seems suitable to commence with the subject of obstetrics; because, in that department, preventive measures, so far as I know, were first generally observed. For many years obstetricians, including the majority of general practitioners, have realized the importance of keeping women under very careful observation during the whole, or the greater part of pregnancy. Our object is, to put the matter very plainly, to prevent our patients from getting sick. We desire especially to prevent toxæmia, and its results, such as per-

nicious vomiting, acute yellow atrophy and eclampsia. This is, of course, only a small part of the story, but it seems sufficient to illustrate our point.

Let us now consider preventive treatment in connection with the young babe. It is unnecessary to name the many dangers to which it is exposed. The doctor of the past has been altogether too indifferent about the proper care of the baby. When he is informed that the little one has been fretful, he too often makes no examination, and simply advises a dose of castor oil, or something of that sort. The doctor should realize that the care of a baby is really a serious problem. With this in his mind, he should supervise. Proper supervision requires no great brain power, but there is a supreme necessity for looking after details. Among these details are cleanliness, suitable dressing, care during the day, care during the night, proper feeding, care of the mouth during teething, and many other details which need not be mentioned now. These recommendations mean frequent visits, careful inspection at each visit, and minute instructions, preferably written in the majority of cases. Our object should be to prevent disease. Mothers more than fathers are now realizing the value of preventive measures, and they are endeavoring to educate their husbands. We believe that even now a large portion of the public would prefer to pay the doctors for keeping their children well instead of waiting until they get sick before asking for professional treatment.

We do not know that there is any age at which the family doctor should cease to exercise a careful supervision over children. We may, however, refer to one very important matter. It is generally

understood that the period when a girl is growing into womanhood is one of the most critical in her life. The family doctor knows this; but, too frequently does not take the active interest in her that he should. Unfortunately, many mothers think that slight disturbances, or small variations from perfect health are usual, and that the girl will "grow out of them" before, or, as she becomes a woman. In certain schools well conducted in a general way a girl is sometimes allowed to get seriously ill before her mother or the doctor is notified. No girl should be allowed to get sick in the ordinary sense of the word before she is looked after. Our aim should be to prevent the illness. In such a case we should consider clothing, food, regulation of the bowels, ventilation, exercise and schooling. To prevent serious illness it is sometimes advisable to remove the girl from school for a term. The mother is anxious to have her daughter get a good education and frequently objects to any "break" in her studies. The father is generally worse, and is inclined to despise a "doctor's fads." He will wait until his daughter gets nervous prostration; and then, with his eyes properly filled with tears, will send her to a sanatorium for six or twelve months. However, in such a case before serious damage is done, the physician may explain the matter to the mother and show her that good health is the all important thing for her child; and, if he convinces her, he can generally accomplish his object. Perhaps you remember what Brown said to his friend: "See here, Jones, why don't you brace up and show your wife who is running your house." "It is quite unnecessary," replies Jones, "she knows." If you get the mother on your side, you can usually carry your point.

Let us refer to another time in a woman's life the consideration of which will help to illustrate the trend of this paper. It is well known that the menopause is a critical period. It is thought by some that both doctors and patients are inclined to get too "fussy" on this subject. That may be true to a certain extent, but we believe that every doubtful case should be most carefully investigated. In many cases we can, by

simple preventive treatment and judicious advice, accomplish great good without giving much medicine. In such cases we should, of course, always consider the possibility of malignant disease. When in doubt one should get the help of a specialist as soon as possible.

This leads up to the consideration of diagnosis which is exceedingly important in connection with preventive treatment. Let us go back to the patient we were treating during pregnancy. There may be doubt as to the condition. If there is ectopic gestation, it is exceedingly important that the family doctor should be able to make a diagnosis. His ability to do so is quite as important, if not more so, than similar ability in the specialist. In extra-uterine pregnancy he should recognize the condition before rupture takes place. Some of the saddest tragedies I have known have resulted from a non-recognition of this condition in time to prevent disaster. Without giving any other examples we have only to say that the family doctor should be an all-round good diagnostician.

Let us glance at the great field of abdominal diseases. How much can we accomplish as to them by preventive measures? No detailed attempt will now be made to answer this question. But let us think of certain possibilities. Supposing our general practitioners took charge of all the children in Canada aged six, and they and their successors looked after them continuously until they reached the age of twenty-six (or more if you like)—taught them how to eat, how to drink, how to sleep, how to dress, how to work, how to rest, how to play—in short, how to live—what would be the result? We don't know, but we have an idea they would to a wonderful extent curtail the work of all kinds of specialists, and, in fact, put a vast number of them "out of business."

In the meantime we must recognize the fact that specialism is at present a necessity, and that the specialists of to-day are doing the grandest work in various departments that the world has ever known. We acknowledge this, although we have to note with regret that some of our latest specialists who have been rapidly manufactured without any knowledge of gen-

eral practice are rather narrow and often unsafe in some respects. Most of our specialists in Canada were general practitioners first, and specialists second, and on the whole are a body of men we admire very much, even though it be our main object to limit their work as much as possible.

We are justly proud of our advances in matters pertaining to public health; but we want the family doctor to go far beyond the science of hygiene as it is generally understood. It is not enough to learn how to milk a cow according to Dr. Hastings' most improved methods, to chlorinate dirty water, to open windows, to dig ditches, to construct sewers, to burn refuse, to select the proper kind of fish, flesh, fowl, etc. We recognize the vast importance of all these things, but we know pure milk kills many babies; we know that pure food kills many children and adults. We find, for instance, that a robust, vigorous young athlete who is a "good feeder" frequently dies young, while the poor dyspeptic, who has a capacity for eating about equal to that of a canary bird, never dies—or takes such a long time to die that we are apt to lose interest in his existence, and scarcely notice his final departure. The important lesson to learn is that the over-eater dies sooner than the under-eater, and that the over-fed baby dies sooner than the under-fed. We wish it to be understood, however, that we do not approve of either over-feeding or under-feeding.

Let us now consider the financial side. We may be told that people do not want a doctor to make unnecessary visits. That has been true to a large extent in the past. Some people preferred to run a little risk rather than pay for what they considered extra visits. But many of these people now hold views different from those of ten years ago. A physician who purposely makes unnecessary visits and charges for them is simply one of the meanest sort of thieves—and I think there are not many such in our profession. If our patients have not confidence in our integrity, they will not learn quickly the value of preventive supervision.

Let us acknowledge that we cannot always tell how many visits are necessary. In many cases, especially during the last

twenty years, I have been unable to decide how many visits were necessary. My custom has been to act somewhat as follows: After a certain amount of attendance I am in doubt as to the necessity for further visits, and I express such doubt candidly: "Mrs. Jones, I believe this child is well. I don't believe a visit to-morrow will be necessary, but I think I should like to come." The answer has almost invariably been: "Yes, come to-morrow and as often as you like (or as often as you can) until all your doubts are gone."

In looking after a young babe in the majority of cases (it will be in all cases in the future) I make no pretence of waiting for sickness. I see it as often as I think advisable. When a young girl reaches the age of puberty, I tell the mother I wish to watch her child very carefully for a time (not less than two or three years) and explain why. I speak of these things in the first person, because I wish to indicate in as few words as possible that I have had no great difficulty (sometimes none at all) in demonstrating to women, and especially mothers, the meaning and value of the prevention of sickness. I cannot say the same about the other sex, because I have found that the stupidity of men concerning health and sickness is so overpowering that I have now neither the courage nor time to tackle them. However, it seems fairly probable that their business instincts will before long lead them to the discovery that it is cheaper to be kept well than to be allowed to get sick: or, in other words, "Dr. Ounce of Prevention Street" is much superior to "Dr. Pound of Cure Lane."

And now we come to a very important question: Where and how will the family doctor get his training? The advances, especially in medicine and the pure sciences, have been so tremendous in recent years that changes were inevitable, and whether they were made in a judicious manner is a matter which we don't wish to discuss now. It will probably be generally admitted, however, that specialism has been exalted at the expense of general practice. The secret of health is not properly discussed or taught. Hospital training cannot cover half the ground required for the ordinary doctor. Would it not be well for this great Association to consider very carefully the tremendously important question of medical education?

THE RELATION OF THE HEALTH OFFICER TO THE COMMUNITY

By M. R. BOW, M.D.

Medical Officer of Health, Regina.

Read before the Third Congress of the Canadian Public Health Association,
Regina, Sask.

The administration of the public health presents difficulties in common the world over and difficulties in particular in different communities, depending upon climatic conditions, the incidence of certain countries to certain forms of disease, and the general type of citizenship. What is a serious problem in one community may be an accomplished work in another. The Health Officer in Northern countries has in one sense a widely different field from his brother in the South—and yet both have the same great problem to work out—how best to safeguard the public health.

In its daily work the Health Department comes into closer touch with the people than perhaps any other civic department. In order that efficient work may be done with the least possible friction it is essential that the department and the public understand one another. With a desire on the part of each to understand and assist in the work of the other the cause of public health and hence the welfare of mankind, is given new birth. How tremendously important it is, therefore, that all agencies making for the closer co-operation of community and health officer should be used to the best possible advantage.

There are certain works closely related to the public health for the carrying out of which co-operation is not required, such as the purification of the water supply and the extension of the sewerage system. Indeed a very appreciable proportion of the people may strenuously oppose such work, but the work of the health officer in general requires the active co-operation of the community. Within recent years there has been a great awakening of the people to the fact that they

have a definite part to take in public affairs, and that only by their co-operation with their officers can the best results possible be obtained. The old conception of the health officer as that of the man who gave them orders to clear up back yards and who decorated their homes with all manner of objectionable quarantine cards is changing. The people are now beginning to realize something of the purpose behind all organized health effort. We are beginning to see that it is frequently necessary to interfere with the liberty of some for the protection of all. Our communal as well as our individual responsibility is becoming more and more apparent.

What does the health officer owe the community? He owes the community adequate health legislation, efficient administration and health education. The health officer owes the community the enforcement of its health laws. The health laws of a community are a definition of its health rights. As Prof. Allan points out, the health rights a community pretends to enforce will, as a rule, be found in its health code. What health rights are enforced can only be learned from a study of the people to be protected and of the community in which these people live. Our social structure demands the formulation of such rules of action as will prevent one man doing injury to another man's health. Only through common action can the health rights of any community be safeguarded. Public health measures are sometimes defined as those we approve of for our neighbors, but decline for ourselves. Health measures must be equally binding on all, or no member of the community can lay claim to any health rights. The administration of the

public health is not complete till all citizens can lay claim to health rights that are as sacred in the eyes of courts as the right to free speech.

The health officer owes the community the best administration that it is in his power to give. The health of thousands is entrusted to his care—a serious responsibility rests on him. He must be properly trained for the work himself and his department must be manned with trained and competent inspectors if results are to be expected. The day of the untrained sanitary inspector has almost passed. He is giving way to the man with the training necessary to make him a well-qualified unit of the fighting force. In the milk inspection, infectious disease, food, plumbing, child welfare, and all other divisions of the department, competency is the first essential. The work is of too far reaching importance, and of too vital a nature to longer be entrusted to unqualified men. The demand for trained sanitary inspectors throughout our country is a great and growing one, and we must soon consider the provision of more adequate facilities for sanitary instruction. Communities are finding out that it pays in dollars and cents, aside from any higher consideration, to employ properly equipped men for the work of sanitary inspection. The inspector possessed of discretion, patience, diligence and enthusiasm for his work, together with training and experience, is an invaluable asset to any community. The work of such officials should be recognized by the payment of adequate salaries.

The health officer owes the community educational work in public health. By no other means can so much be done to secure the active co-operation of the public and no other work will show larger returns in the conservation of human life. Western communities in particular because of the rapid influx of people of all nationalities, many of them absolutely ignorant of the first essentials in sanitation, are confronted with a problem of tremendous proportions. How to acquaint these people with the health laws of our country, how to teach them so to live as to protect their own lives and the lives of their children, how to raise them up to a high ideal in sanitation, is a work of enormous diffi-

culty—and one in which the health officer should have the co-operation of all social agencies. Public health educational work must be so carried on as to reach all classes of the community, and particularly those who are most ignorant of the necessity of such work. Within recent years a marked interest has been evinced by the public in health matters. The public conscience, so long dormant, has been awakened to the tragedy of preventable disease and premature death. A new appreciation of the value of human life is apparent and a new determination has been born to help in the work of human conservation. Herein lies the hope for the future. When the public has become fully appreciative of the fact that within natural limitations a community can determine its own death rate, we shall be able to record a great forward march in public health achievement.

What are the important agencies of the health officer in educational work?

The Monthly Bulletins, published by many health departments, are doing a splendid work. They are the department's means of communication with the people and can be made a great educational force. In my opinion, these bulletins should be so edited as to make a direct health appeal to the people and should be distributed to every household. In Regina, our Monthly Bulletin is now on its second year and from the interest aroused it is evident that it is appreciated. We publish 4,000 Bulletins in English, and in another year we propose to publish in Roumanian and German in order that we may reach our foreign population.

The moving picture film has already demonstrated its value as an educative force. With its appeal to the eye it brings home to the public in graphic manner the perils resulting from the disregard of public health. In this connection let me say that I trust that the proposed purchase and interchange of films on health subjects by the different health departments of the West may soon be an accomplished fact.

Another great educational force, may I say, the force which presents the greatest possibilities for future public health achievement, is the school. That the sub-

ject of public health does not receive the consideration at the hands of school authorities that it deserves is apparent from a study of any school curriculum. At present little or no attention is paid to the efficient teaching of public health in its wider aspects, in our schools. Why is this so? We are told the school curriculum is so loaded up now that time cannot be found for the teaching of any additional subjects. We answer that whatever else is taught, the welfare of future generations demands that we give the children of to-day such an education as will enable them to live together. Teachers should have the instruction and the experience necessary to stimulate the interest and the power of observation of the child in the subject of public health. It should be so taught that the child is given an insight into the social conditions, the living and working relations of the community as well as a knowledge of hygiene in its personal application. The relation of health and vitality to his present welfare and future efficiency should be made clear to every school child. I do not think that we are asking too much when we ask for the incorporation of a course in public health in every school curriculum.

The press of to-day is also playing an important part in the education of the public in health matters. But sometimes this work is carried along lines not productive of the best results. As an in-

stance of this I may point to the swat-the-fly campaigns to which many newspapers have been devoting considerable space. Prizes have been offered to children bringing in the largest number of flies, and the attention of the public centred on the killing of the fly to the exclusion of the much more important and essential thing—the prevention of the fly. In a large American city it was found that the prize winner in one of those contests had been operating a fly farm on one of the city's nuisance grounds, bringing in the produce from his farm daily. Needless to say, he had not been very strongly impressed with the necessity of the prevention of the fly.

The ultimate aim of all health effort might be defined as the endeavor to give every community the best life insurance possible against preventable disease and premature death. In his work towards this great end the health officer is bound to encounter opposition and a certain amount of criticism. No vaccine has as yet been found that will immunize the health officer against that. However, as the principles of sanitary science become better understood the people begin to see the necessity of the measures which they at first oppose. Whatever our difficulties and discouragements may be, we owe it to ourselves and the community which we serve, to keep ever before us the high ideals of our profession.

OBSCURED VISION

Intolerance.

Diagnosis—

Everyone declares against blindness, and yet who almost is not fond of that which dims his sight and keeps the clear light out of his mind, which should lead him into truth and knowledge.—Locke.

Remedy—

The more we know the more tolerant we must become; for perfect knowledge is perfect charity. Every new thing learned should release us from an old prejudice, and raise us to a broader range of vision.—W. H. Phelps.

SCHOOL BUILDINGS

Some Notes on Hygienic Principles Influencing Design

By J. H. PUNTIN, L.R.I.B.A.

Architect to the Regina Public School Board.

Read before the Third Congress of the Canadian Public Health Association,
Regina, Sask.

Among the buildings of all classes and types calling for many varied requirements and put to many diverse uses, which the architect is called upon to design, probably none is more fascinating than the modern school building or beats with such human interest throughout its conception.

We are brought into touch in the daily course of a busy, and, to the great majority of the public, an imperfectly understood profession with many phases of human life and character. The warehouse, store or office building, planned to yield a commercial return on a commercial investment; the residence as a visible manifestation of its owner's character, enshrining and protecting all that is best and noblest in his innermost life and feeling; the hospital with its merciful provision for the care and cure of the sick and suffering; all have an interest of their own, typifying and expressing as they do, in mute material assembled by master hands, the daily life and progress of the race. But in the school building we are at once lifted in a bound to the future hope and development of the nation and empire. We are not planning to shelter the worker of the present, hale or infirm, whose life has arrived at maturity, whose character is already moulded and formed, whose habits are more or less fixed and whose health and life for good or ill are beyond radical change, viewed from the human standpoint.

Instead we are providing for a vast stream of undeveloped virility, sensitive to influence, with characters to be moulded, minds to be trained, and bodies to be developed, not only for the next generation, but for countless generations to come, which stupendous responsibility and care we can only dimly realize, and each doing our best in our day, pass it on to others to continue.

And as in all other phases of human life and endeavor, the building at once assumes its importance and looms large in the scheme of things, the central concrete factor around which and in which the future life of the nation is evolved.

And if that life is to be a sturdy and vigorous life, then just in proportion must the principles of hygiene, the conservation of health, be studied and practised in the planning of the school building.

It is a matter for congratulation that during the last generation, the civilized nations have realized the importance of the hygienic education of the young. In this new country of Western Canada, large amounts of public money have been set aside for this purpose of providing adequate and well-equipped buildings in which the work may be duly carried on. Yet much remains to be done along the lines of hygienic planning and equipment.

Professor Irving Fisher, of Yale, in a report on National Vitality, prepared for the National Conservation Commission, says:

(a) "With us, as well as in most European countries, children are compelled by the State to attend school for a number of years. Many of them suffer constantly from defective vision, hearing and respiration, from nervous overstrain, and from other ailments which are greatly aggravated by the confinement and stress of school life."

(b) "Pupils are always exposed to infectious diseases. It is no unusual thing in our country to see a contagious disease sweep through a whole school so rapidly that the local Board of Health can hear of it and order the school closed only after the harm has been done."

(c) "Great as is the injury done by the spread of infectious diseases to children

thus massed together in schools, the injury resulting from imperfect seating, lighting, ventilation and sanitation of school buildings is still more serious."

Dr. Thomas D. Wood, Professor of Physical Education at Teachers' College, Columbia University, in a report on health problem in education, made to the National Teachers' Association, says:

"There are in the schools of the United States to-day, approximately 20,000,000 pupils. Careful study of statistics and estimation of all conditions leads to the personal conclusions that about seventy-five per cent., or 15,000,000 of the school children in this country need attention to-day for physical defects, which are prejudicial to health and which are partially or completely remediable."

There are in that country some 1,285 cities, having organized systems of graded public schools under superintendents. Recently an investigation of these schools was undertaken by the Sage Foundation with a view of ascertaining just what is being done for the health of school children. The Sage report covers the reports from 1,038 school systems, or nearly 90 per cent. of the total number. Only 43 per cent. of the cities reporting have regular organized systems of medical inspection in their schools.

Those of us who have been called upon to carry out hospital construction have had instilled, both by study and experience, the value of fresh air and sunshine as important factors in the cure of sickness and disease. Quite as important are these twin requirements when applied to schools.

The site should be spacious and airy, open to all the winds of Heaven and removed as far as possible from the congested city areas. One of the most beneficial results of the attention given to town planning in late years is that public attention is being drawn to the necessity of providing open spaces or "lungs" in our growing cities. One or more blocks adjacent to each of these parks should be reserved for school purposes so that the latter benefits from the additional open space provided by the former.

Again, it is suggested that a building of 24 class rooms is the limit in size that should be placed on the average city block. The writer has in mind several fine school

buildings built in the great cities to the South, which were designed with beauty and skill, sanitation and ventilation perfect, but which were crowded on inadequate sites, resulting in cramped and broken-up playgrounds. As a result, the children had in playing to overflow on the street.

In a crowded population, it would be advisable to build two separate schools of 22 or 24 rooms each, rather than one building of double this capacity, especially as the latter usually means building on all or at least three sides of a square on plan, resulting in enclosed or partially enclosed courts with resulting impediment to free movement of light and air.

Placing of School Upon Its Site.

From an architectural standpoint, perhaps in common with other classes of buildings, the appearance of the school is enhanced by placing it in the centre of the site and keeping the building well back toward the rear. This gives a spacious foreground and the boilers, machinery and coal storage being generally placed at the rear, are thus easily served from the street without cutting up the available ground area by roadways and cart tracts.

From the view of giving the space allotted to playgrounds due value, however, it has occasionally been found advisable to place the building toward one end of the site, thus giving a larger unbroken area for purposes of recreation.

Either of these recommendations work out well in practice, and may be adopted as the appearance of building or the necessity for recreative purposes are severally given importance. The most important factor in this consideration is undoubtedly the orientation of the building, and as this is dependent upon the detail building plan adopted, some notes are herewith presented upon the latter phase of the question.

School plans are, perhaps, as different in composition and arrangement as the multitude of effects produced from the seven notes of the musical scale. And just in common, after studying some of the complex types evolved during the last decade, one turns toward the simple oblong type of building feeling that perhaps it is the best in the long run. At any rate, children don't get lost and wander round

corridors with all kinds of angles and turns and certainly every contractor knows that a building with few angles is the most economical to construct.

The type of building recommended to and adopted by the Regina School Board consists of a central hall or corridor 18.0 wide, so as to be used as a drill corridor or assembly space at will, running the full length of the building, and only lit by windows at each end. The class rooms are arranged evenly on each side of this corridor, and by spreading same in centre of front, placing the principal's and teachers' rooms and library in the space thus created, space is obtained opposite for the boys' and girls' staircases at ends of building, yet clear of main corridor. By this means the placing of staircases in latter is avoided, doing away with the "borrowed" lighting inevitable in such an arrangement, and resulting in direct light and ventilation the full length of the corridor.

Furthermore, by placing this corridor from north to south, with the class rooms on each side lighted from the east and west, direct sunlight enters every class room in the building once a day, those on the east side receiving the morning sun, and those on the west the afternoon sun, while the south windows of corridor admit the noon-day rays.

By using a unit of 1 super foot of glass area to five super feet of floor space, a cheerful and sunny effect results, aided by the light natural finish of the trim and delicate tinting on plaster walls and ceilings.

Construction.

The importance of permanent and fireproof construction in any modern building is now recognized, and in schools more especially it is recommended to construct in concrete skeleton faced with brick or stone, whenever the size of the buildings allow of same. Smaller schools may be constructed with timber floors, but it is essential that the heating plant and machinery be enclosed by brick walls and concrete floors over same to obviate as far as possible all danger of fire. In addition all stairways and halls should, as in all buildings, be constructed of fireproof material and isolated by fireproof partitions on all landings so that possible outbreaks

of fire could be confined and controlled to point of outbreak.

Walls and Floors.

These are two surfaces which sometimes, for the sake of decoration, or through mere lack of thought, are frequently abused from a health standpoint.

In one city school in the West, the writer noticed that the plaster surfaces were finished in sand stucco, and in another, stained burlap. While the designer had the object in his mind of introducing "texture" to his interior surfaces, yet surely no error of judgment would condone the placing of such surfaces in a school building, being, as they are, a very lodging for dust and germ life.

Let all plaster surfaces be trowelled hard and smooth, rounding all angles into door and window frames, and using as few angles and projections as possible. If dados are to be used as a feature, use the prepared faced burlap and paint or varnish the surface.

Where money will allow, as in higher grade schools, glazed tile or faience wall surfaces may be used throughout, as dado surfaces, but especially in the toilet rooms. In the smaller school the walls of latter may be painted and enamelled with a cove tile base.

Floors are in themselves an exhaustive study. The perfect floor should be impervious and without joints, noiseless and elastic, easily laid and repaired, yet durable. For of all floors, no floor is subject to such wear as the school floor.

The three materials, in the writer's opinion, not suitable are (1) hard maple for class room, (2) and (3) asphalt and marble terrazzo for halls and corridors.

The maple should be on no account oiled, as this forms eventually a black seum on the surface of the floor. Have the maple smoothed off and scrubbed white in use by constant washing.

Mastic asphalt, when well laid and ironed down, forms an ideal floor, being sanitary in every way, but is open to the objection of its somewhat dully black color.

Terrazzo makes an excellent flooring material, if care is taken to divide it into panels to take up the almost inevitable cracking which would otherwise develop.

Of late years one or two successful ex-

periments have been brought to the writer's attention of what is known as "composition" flooring, the composition being generally a patented form of Portland cement, magnesia, asbestos and fine sawdust mixed in varying proportion.

Much of the success of this class of flooring, however, depends on the skill of the man laying the floor, and in the West this is a somewhat variable factor. At the same time a floor of this type has a future, especially as a class room floor, for the many joints in maple flooring are distinctly a disadvantage in practice.

Lighting, heating and ventilation would each in themselves form a series of papers far beyond the range of the present article.

In our latest Regina schools, we light from one wall of the class room only, and over the pupils' left shoulder. Heating is kept quite separate from the ventilation system, and if effected by steam operating on vacuum, automatically controlled by thermostats in each class room. Ventilation is effected by mechanical means, plenum fan in basement delivering fresh air after tempering, washing and humidifying process are passed; through ducts delivering in each class room, and to all halls and corridors. An exhaust fan of slightly accelerated velocity is located in roof storey and is connected to class rooms and toilet rooms. It will be noted that all places from which odors emanate, such as toilet and cloak rooms, should have the air from these exhausted, only permitting the air to go toward these rooms at all times. In the halls and corridors these should only be plenum and no exhaust, so that when a door in a room is opened the tendency will be for the air to go toward the room from these halls rather than away from them.

Natural Ventilation.

There is one method of ventilation among the several systems in use at the present day which should not be wholly lost sight of; I refer to natural or window ventilation. In the quantity of air moved and in the effectiveness of result, human ingenuity cannot surpass nature in its simplicity.

In England this system has been developed very fully, the inlets consisting of wall tubes or window boxes, placed about sill level, while the outlets are invariably at ceiling level connecting by ducts in the

roof space to an exhaust head or extractor of suitable capacity. This extractor is operated by natural currents of air always found at roof altitude, and is known in various forms, among which the Boyle system has attained considerable success.

While climatic conditions would render imperative some modification of this system as applied to the Dominion of Canada, for country and suburban schools, good results would undoubtedly be obtained by the study and adoption of this type of ventilating design.

As regards ventilation generally, there is probably no branch of building science (excepting acoustics) about which so much has been said and conclusions arrived at, with so little practical data, as the ventilation of school buildings. Wall and window chill together with the position of heating radiators affect air currents to such a degree that considerable difference of opinion is existing among engineers as to the proper location of inlet and exhaust points in each room.

In considering the city school a few suggestions are herewith appended, covering special requirements as regards this type of building.

Cloak Rooms.

When cloak rooms are placed as an annex of or forming part of each class room, it frequently occurs that in wet weather unhealthy conditions are set up by clothing drying out and steaming, thus polluting the air of class room. One of the best schemes for obviating this is to form the clothes spaces in a recess about 6.6 high off the class room and closing the recess by panelled doors about 3.0 wide, sliding vertically. In the Wetmore School, in this city, these doors are balanced and framed of hyloplate blackboard in a light frame so that a child can lift same. By keeping the bottom of the panels about 5 inches up from the floor and connecting each clothes recess by a duct to the exhaust fans, the air from the class room passes through recess and up the exhaust duct, carrying all unhealthy odors away clear.

Nurses and Dental Rooms.

In each building provision should be made for a room in which children's eyes and teeth may be inspected and the defects noted. Such a room should be provided with a small dispensary, having a

suitable sink and provided with hot and cold water. To minimize risk of infection, walls and woodwork are better finished with paint or enamel, and floor of some sanitary close textured material, such as white vitrified tile or terrazzo.

For backward or mentally deficient children, another small room is desirable where around a table, individual tuition may be given.

Too often the toilet rooms are tucked away in some obscure and dimly-lighted region in the basement, with a view of the boilers and coal store in the foreground. One would imagine the sole object of the designer was to conceal these necessary quarters as much as possible, and, judging by the average quality of the fittings and the condition in which they are sometimes kept, the designer and the janitor would appear to be loyal allies:

"Two souls with but a single thought,
Two hearts that beat as one."

In the modern school basement space equivalent to two class rooms should be allotted, and in a portion of basement where ample direct air and sunlight will enter daily.

Walls and floors should be finished white in non-absorbant material with as few joints as possible. Avoid wood partitions; where marble cannot be used, sheet iron finished in enamel paint makes a good material. Slate is not recommended.

Plumbing fixtures are innumerable in variety of design, but makes should be chosen by well-known firms specializing in school goods.

Urinals should flush automatically, but in the writer's opinion seat action closets tend to make children habitually careless. A simple flush handle (with all chains, tanks, valves, etc., behind partition in plumbing space) projecting from partition will help to educate a child in sanitary matters, especially if the teacher occasionally makes the lesson obligatory.

The writer suggests that doors of w.c. compartments should be kept up well off the floor (this applies also to partitions) and hung on spring hinges to open inward, so that when compartment is vacant the door stands back, or wide open. By this means the teacher's inspection is facilitated and occupied compartments noted at a glance.

Assembly Halls.

All city schools of any size should possess an Assembly Hall capable of seating at least 75 per cent. of the school accommodation and provided with a platform and simple stage accommodation, so that children's choruses and lectures may be advantageously rendered.

The placing of Assembly Hall in roof space is not recommended. If consideration of funds and size of site allow, the best position is in the centre of the building on ground floor, and by taking this hall through two storey heights and providing a gallery, effective proportions and acoustical properties are maintained.

Cost.

There is an impression which we all experienced at times, that attention to details such as I have very briefly outlined, has an effect upon the cost of building already high, and that on the question of economy those entrusted with the financing and building of schools should adopt only such improvements as commend themselves on small surface cost.

After an active experience in design and construction, dating from 1891, my recommendation is that the best way is always the cheapest in the long run. In a well-designed building, increased capital cost wisely expended invariably means lessened maintenance rates and annual depreciation.

Take fireproofing as one instance. Concrete construction increases the capital cost from 20 to 25 per cent., yet annual depreciation is cut 50 per cent. and insurance against fire is at once reduced proportionately.

Canada and the United States have the unenviable record of heading the list with a total annual loss by fire of many hundred thousand dollars in excess of any other country in the world. This loss is not borne by the insurance companies as may be imagined, but is borne directly by the community at large in enhanced insurance rates on every policy written. And so through the list.

Again, school buildings, of all buildings, should be architecturally simple and free from lavish ornament of any kind, although taste, balance and good proportion should be paramount throughout the design. While on the question of cost, it may be

noted for purposes of comparison the Regina School Board at present have three schools under construction, namely, the Connaught, costing \$168,091; the Benson, costing \$169,965; and the Wetmore, at the contract figure of \$202,470. These schools have embodied the latest and most modern ideas, both in construction, ventilating, heating and equipment, and the cost in cents, per cubic foot complete, works out at 23.6, 23.8, and 23.2 respectively.

To those familiar with building costs, these figures speak for themselves, and the remarkably moderate resultant for high-class construction will be apparent to all.

In closing I have one suggestion to make to those interested in the training and education of the young, and that is the provision of at least one school planned on the open air type in each of the outskirts of our large cities. In this Western country tuberculosis exists in quite a prevalent degree as every medical man knows, and one way to prevent the spread of this dread disease is to begin with the younger generation. Very encouraging reports have been submitted from various authorities who have begun these schools in an experimental way.

The Education Committee of the County Council of Carnarvonshire, in North Wales, have built two open air schools near Carnarvon, at which the children are being taught the usual curriculum and such of the people who have open minds are being taught an object lesson in the virtue of open windows.

Little more than a year has passed since the school at Bryn Aerau was opened, but its value is already recognizable. Educationists and hygienists from various parts of the country and the Continent have been to see it, and I shall be much surprised if Carnarvon does not set the fashion in school fabrics for the whole of the civilized world. Be that as it may, Carnarvon is content and intends to build open-air schools wherever the situation is suitable.

From May 28, 1912, when the school of Bryn Aerau was opened, to May 9th, this year, the windows were wide open for 203 days out of 238. North winds did blow, rain and hail and snow, but the children went on with their three R's unperturbed. The average temperature was 58.5 in the summer and 52.1 in winter, the rooms being

heated with coal fires when Jack Frost came nipping in. The windows run down one side of a marching corridor, and on the other side are moveable glass partitions which shut off the class rooms. The moving of the windows and the partitions throws the class rooms open to the wind and the sun. The cost of such schools is not higher than that of the ordinary school. The expenditure for land, building, and furnishing is about £15 per child, which is just about what the committee would pay for a school of the ordinary type.

About the architecture and the material aspect of these schools, I shall not say another word. The proof of a school is in the intelligence and health of the children thereof and the health and the intelligence of the children of Bryn Aerau are enough to make every education committee in the country set about considering this type of building at an early date.

It will pay them to do so in the long run, not only in the finer coming citizens, but in the larger grants from the Government. The grants are made nowadays for attendance. Disease plays havoc with attendance and open air plays havoc with disease.

During last winter there was not a single absence from the Bryn Aerau School owing to coughs or colds, nor was there a case of infectious disease. And in the hot summer days, when the children of an ordinary class room become even as Tennyson's lotus-eaters (only more so), these youngsters were always wide awake and keen on their work. The teachers never experienced "school headaches," that annoying complaint which is peculiar to men and women who have to control large classes of youngsters in stale atmospheres which poison the blood and corrupt the most angelic temper.

On July 25, September 10, and October 17, the 73 children were weighed and measured, and if growing bulk be a sign of physical betterment, then the Bryn Aerau children are on the road to becoming men and women who will inspire their native bards to rhapsodies.

The gain in weight between July and October, allowing for the difference in summer and winter clothes, ranges from 2 lbs. to 10 lbs., and the average weight and height, compared with the youngsters of

other schools in the district, showed that the six-year-olds of Bryn Aerau were 7 lbs. heavier and nearly 3 inches taller; the eleven-year-olds nearly 7 lbs. heavier and $2\frac{1}{2}$ inches taller, and the thirteen-year-olds nearly 3 lbs. heavier and 2 inches taller. Before they went to the open-air school they were not superior to the boys and girls of the surrounding country. It is as though they have been dosed with Mr. F. G. Wells's food of the gods. They have shot up as a rose tree does when long-neglected root-encircling soil is hand-forked and the air and rain allowed to do their work. In fact, that is just about what has happened.

The one distressing feature of the open-air school is that it may cause labor unrest. Wages are low, prices are high, and the open-air scholars are breaking all records in the matter of eating. But as both the girls and boys have become so inured to fresh air that they scorn to wear hats, perhaps what is spent on extra food will be saved on clothes and doctor's bills, and so there may be no trouble.

Nor is the improvement merely in body. The children are cleaner and more tidy than they were in their old school, which was once a chapel. And they are brighter brained. This is not just the opinion of the teachers or the parents. Three out of the eight country school scholarships were won last year by Bryn Aerau children, although theirs is one of the smallest schools in the district, which contains 20,000 school children. Need I say that three

wins out of eight is far above the average, or argue that the peculiar success must be due to the peculiarity of the school?

The children are being taught the theory of fresh air as well as the practice, and they are becoming fanatics on the subject. There will be fresh air revival meetings in Carnarvon before long, unless I am much mistaken. The boys always have a taste for breaking windows. It arises, I now firmly believe, from a healthy instinct. About Bryn Aerau they are not breaking windows, at all events not their own, but they are pointing out to their parents the errors of their stuffy ways, and Dr. Parry Edwards, the County Medical Officer, states in effect, that the open window has become an open question where once it was looked upon as a draughty devise of the Prince of Darkness.

Windows are being opened that were never opened before, and "whenever this practice becomes general in rural Wales," says the doctor, "we shall have done more for the prevention of consumption than it is possible for all the sanatoria to accomplish."

In a climate such as ours, where the children are confined indoors during a great portion of the winter, such buildings will have a great educative influence in our midst, and if the result is to enhance the virility of our coming race by providing sound minds in healthy bodies, we of this generation will feel that our time and money has indeed been well spent.

MORAL AGUE

Cowardice.

Diagnosis—

To know what is right and fear to do it, this is cowardice.—Confucius.

Remedy—

Let it not be recorded in our memories, that in this moment of eternity, when we who were named by our names flitted across the light, we were afraid of any fact or disgraced the fair Day by a pusillanimous preference of our bread to our freedom. . . . If there is any great and good thing in store for you, it will not come at the first, or the second call, nor in the shape of fashion, ease, and city drawing rooms. . . . "Steep and craggy," said Porphyry, "is the path of the gods."—Emerson.

HEATING AND VENTILATING MODERN SCHOOL BUILDINGS

By S. S. KENNEDY

Consulting Engineer, Winnipeg.

Read before the Third Congress of the Canadian Public Health Association,
Regina, Sask.

It is not within the province of this paper to deal with the many advantages and disadvantages of the various types of mechanical ventilating and heating plants being installed in school buildings throughout the country, but merely to point out some of the many features of a good system and explain how the apparatus should be installed to give good results.

Every modern school building in Canada should be provided with a heating system capable of maintaining a temperature of 68 degrees Fahrenheit throughout the building, when the temperature outside is the coldest known in the locality in which the school is situated, and, at the same time, maintain a relative humidity of at least 40 per cent. It cannot be expected that children when working in a stuffy, overheated or uncomfortable atmosphere can make the same progress that would be attained if they were working in the more favorable surroundings that are met with when the class rooms are properly ventilated.

To me there appears to be no doubt but that the greater portion of failures of children to pass the grade examinations are due to the fact that they had lost their ambition by having to study in unventilated and unsanitary buildings, and as these children have to repeat the grade work they are not only delayed in their advancement, but they cost the ratepayers additional money for larger schools, more teachers and additional books.

If there is any place in the world where mechanical ventilation is required in school buildings, it certainly is in Canada, where the winter season is so long and so severe that the windows have to be kept practically hermetically sealed for approximately six months each year

to prevent objectionable draughts, and not only the architect and engineer, but the School Board and the Provincial Board of Health should give the school ventilation problem their careful attention. In fact, it would not be carrying the matter to extremes if there were enacted Provincial laws requiring school buildings to be provided with a positive fresh air supply, the quantity supplied to be in accordance with the number of occupants. Laws similar to this exist in many of the States in America, and are apparently meeting with general approval.

There are many members of School Boards who recognize the advantage to be gained by a good ventilating installation, but who do not realize the necessity of designing it when the plans of the building are being prepared, with the usual result that when the time comes to prepare the ventilating plans, the correct spaces have not been provided to accommodate a good layout, although other things of much less importance have been amply taken care of. This is often the cause of the apparatus not giving the satisfactory results that would have been obtained had the proper space in the proper location been assigned to the machinery and ventilating ducts.

One of the most important parts of any heating plant is the smoke chimney. Too little attention is paid to this by nearly all architects and a great many engineers. There is no smoke consuming device that the writer knows of that assists so much in the elimination of the universal smoke nuisance, as does a well designed smoke chimney. The height of the smoke chimney in the usual school building, which has a basement and two storeys, is generally about 65 ft. or 68 ft. above the fire

grates at the boiler. Now, for boiler capacities usually installed in school buildings containing not more than twelve class rooms, a chimney 68 ft. high, under the usual conditions, is ample, but for buildings containing sixteen class rooms or more the chimney should be not less than 80 ft. high, and in many cases should be 100 ft. Usually the architect objects to a chimney being erected higher than the building, and very recently the writer, when preparing plans for the heating and ventilating work on a certain school building, asked the architect to increase the chimney height, to which he strongly objected on the grounds that the skyline over the building would be broken if the chimney were any higher. Now, it appears to me that a chimney with a neatly designed cap is not any more objectionable, protruding into the skyline, than a wreath of black smoke, which, accompanied by a low boiler efficiency, are the usual results of a low chimney.

The boilers to be recommended for school building up to and including twelve class room sizes, are the horizontal return tubular and the fire box types, and for buildings larger than the twelve class room size, the marine or fire tube boiler equipped with suitable Dutch ovens gives very good results.

The radiators for heating the building, and the radiators for ventilation, should be kept separate, that is, radiators of ample capacity to provide heat for all transmission losses through outside walls, windows and doors, should be placed in the various rooms and just enough radiation placed in the fresh air supply to heat the incoming air to the temperature maintained in the class rooms. A fan should be installed in the basement and arranged to supply fresh air to all class rooms, play rooms, teachers' rooms, manual training and domestic science rooms, the foul air from these rooms to be drawn out by an exhaust fan placed in the attic. In school buildings containing not more than sixteen class rooms very good results are obtained by omitting the exhaust fan and arranging the fresh air fan to supply the air under sufficient pressure to force the removal of the foul air through the vent flues. The vents from the toilet rooms should not be connected to the

main vents, but should be connected to the exhaust fan, and the discharge carried separately through the roof. In schools containing not more than eight class rooms, where the toilets are comparatively small, the exhaust fan may be omitted by placing steam coils in the vent flues which gives very good results during the heating season, and in summer the open windows may be relied upon to give ample toilet room ventilation. The air inlet to the fresh air fan should be located not nearer than 40 ft. distant from the coal delivery, and, if possible, should be on the opposite side of the building (and be of such a size that when the fan is running at usual speed the air velocity through it will not exceed 1,000 ft. per minute). The air should be tempered, washed and reheated. The washer usually consists of a centrifugal pump driven by an electric motor, a spray chamber, water tank and eliminator plates. The spray chamber is usually constructed of galvanized iron, and of such a size that the air velocity through it does not exceed 500 ft. per minute. The discharge from the pump is carried into this chamber and connected to a series of spray nozzles which, when in operation, form a thin sheet of water or heavy mist completely across the chamber which removes from the air particles of dust and other solid matter that would otherwise be carried into and distributed throughout the building, and, at the same time, leaving the air at any predetermined relative humidity, which can be governed by the temperature maintained in the spray chamber and spray water.

The fans most suitable for school work are the multiblade centrifugal type, the peripheral speed of which, to insure noiseless operation, should not exceed 2,700 ft. per minute for small sizes, and 3,000 ft. per minute for the larger sizes. The air velocity in the horizontal ducts, starting at the fan, should not exceed 1,500 ft. per minute, and decrease to about 1,000 ft. per minute at the end. The velocity in the vertical risers should not be greater than 600 ft. per minute and should be reduced at the register face by baffles to not more than 250 ft. per minute.

The bottom of the fresh air register should be not less than 7 ft., and not more

than 8 ft. above the floor line, and the vent outlets should be placed near the floor on the same side of the room with fresh air inlets. This will give what is commonly known as the downward system of ventilation, that is, the movement of air in the room is downward. There are some who claim that this is not good practice and that the air should be admitted at the floor and allowed to vent from near the ceiling, in which case the fresh air ducts and registers would have to be increased so that the air velocity entering the room would not be greater than 120 ft. per minute, as experience has taught us that with air at 70 degrees F. blowing into a room faster than this causes a very objectionable draught to the occupants sitting directly in front of the inlets. This would mean that the fresh air registers suitable for the amount of air usually supplied to class rooms, would be so large that they would not only be unsightly, but costly to install.

Apart from the draught difficulties, it appears to the writer that if the air were admitted at the floor it would only tend to reduce the percentage of carbon dioxide in room, and the other impurities, such as particles of dust, odors from the bodies and clothing, etc., would be carried up into the breathing line. On the other hand, with the downward movement of air the pupils are always inhaling fresh air that has not been in contact with their bodies or clothing, or that has been exhaled by other pupils, and after being exhaled, passes downward and out through the vent registers at the floor.

The air velocity through the vent registers should not exceed 400 ft. per minute; through the vertical vent risers not more than 600 ft. per minute and through the main duct in roof space not more than 1,500 ft. per minute.

Sometimes to cut down the cost of the installation the vertical vent risers terminate at the floor of the roof space, and the air allowed to find its way to a common outlet through the roof, but this is not to be recommended as it generally converts the roof space into a dust and germ settling chamber, and when the fan is not running a back draft will often carry considerable of the accumulation down into the class rooms.

The amount of fresh air to be supplied is determined by the number of pupils that will occupy each class room. There has been much discussion in recent years, by those interested in ventilation on the subject of how much fresh air should be supplied in order to keep the air relatively pure, and it appears to be the opinion of those who have made extensive experiments that each class room ought to be provided with at least 30 cubic feet of fresh air per minute for each occupant. Of course, a great deal less would be ample if a suitable system could be designed and installed that would draw out the foul air as soon as it is exhaled and not allowed to mix with and contaminate the incoming fresh air.

Ideal results would be obtained if the building construction would permit the air being admitted through a great number of small openings over the entire ceiling, and a like number of exhaust openings in the floor. This would maintain a uniform downward flow throughout the entire room and would supply to each pupil an equal quantity of fresh air which would be drawn out as soon as it is exhaled. Such a system would require a considerable change in the usual building construction in order to provide a space in the ceiling for the fresh air supply and a space in the floor for the foul air to exhaust.

No heating and ventilating system is properly equipped that is not provided with some device to automatically control the steam supply to the fan coils and the direct radiators. The fan coils are usually designed to warm the air from the coldest winter weather to 70 degrees Fahr., which, in Canada, is approximately a rise of 100 degrees, and unless an automatic control system is installed the temperature of the fresh air entering the room will vary directly with the varying outside temperatures.

There are several automatic temperature controlling devices on the market that give good results when properly handled. They consist of a small air compressor, air tank, a system of small air piping, diaphragm steam valves on all steam units to be controlled and a thermostat in the spray chamber, in the fan

discharge, and in each room. The air piping is installed so as to carry the air pressure, usually about 15 lbs. from the air compressor to the thermostats, and from them to the diaphragm valves on the radiators and fan coils. The thermostats are constructed with a very sensitive expanding material which expands and contracts with the varying temperature in the room, and in doing so operates the air supply in the diaphragm valves, which in turn opens or closes the steam supply to the heating units. Care

should be taken that the temperature controlling apparatus is installed and guaranteed by the manufacturer, as experience has taught us that good results from this particular apparatus can only be obtained by the most careful installation.

To my mind, the most important features in modern school building construction are the ventilation and sanitary conditions, and it is to be hoped that it will not be a great while before Provincial laws shall govern these conditions throughout Canada.

MENTAL ATTRITION.

Worry.

Diagnosis—

The Plague went forth in the land, and one met him, asking him if he could stay his cruel hand. The Plague answered that he meant to be merciful; he would only take five thousand from the Earth. Some time afterwards these two met again. "So thou art a liar as well as a murderer!" said the other to the Plague: "Thy five thousand meant fifty thousand!" "Not so," answered the Plague; "I took but my five thousand—Fear and worry killed the others."—From the Arabic.

Remedy—

Hundreds of advertisements nowadays promise a cure for wrinkles, so that wrinkles must be pretty general. There is only one cure for them, and I give it to you, with my love: "Don't worry."—M. Lubert.

THE LAND OF THE JEWS

By FLORENCE WITHROW, B.A.

Hebrew Race.

Our "forefather Abraham" came up out of Ur of the Chaldees, supposedly about 2,000 years before the Christian era. The country whither he came was a narrow land by the sea and separated from the deserts of Mesopotamia by rocky ranges. Four thousand years have sped since the progenitor of Israel settled in this land and spread his tents and flocks in the pleasant fields of Samaria, nigh unto Shechem and Luz where his renowned descendant Jacob dreamed his memorable dream.

Strange visions and stranger vicissitudes have been Israel's in the ages since, yet through varied experiences God has been mindful of His own. Although scattered afar, a race without a country, Jehovah yet holds them in the hollow of His hand. "The Chosen People," rightly so called, as revealers of religion, have always been a peculiar and separate race. They have dominated intellectual thought in all ages and in many lands. To-day in Germany, Austria and to some extent in England, they are leaders of scientific and political thought. Zionism is variously viewed. Some claim the Jew will yet inhabit the land of his birth. Whether he migrates to Palestine or not, he is assuredly coming into his own in the political and financial estimation of the world, and signs of the times point to some better government and newer industrial conditions in modern Palestine. The Turk may not always occupy this usurped territory.

It is a land so intensely interesting, physically and historically, we cannot be content to write a mere travel sketch of three recent visits. Present conditions and incidents must be duly mentioned, but, through affection for the race concerned, "the oppressed through all the world," we are constrained to begin far, far back with their origin. The historic part of this chronicle is merely an epitome of Biblical history, yet to tabulate it in the mind is the best aid to memory.

Unique Land.

The patriarch Abram's migration from the Euphrates brought him to a curious land, one of triple barriers, within which is a physical formation wholly unlike anything on the earth. A noted geologist states, "There may be something on the surface of another planet to match the Jordan valley, there is nothing on this. No other part of the earth, uncovered by water, sinks as many feet below sea level. Yet here is a Ghor 160 miles long and 2 to 15 broad falling nearly 1,300 ft. to the Dead Sea, whose bottom is 1,300 ft. deeper still." The Jordan, which means "descender," drops 2,000 ft. from source to outlet and reaches a depression of 5,000 ft. below Jerusalem.

Distances in Palestine are short. From Jerusalem to Jericho is only 20 miles, from Jerusalem to Samaria 40 miles, from Samaria to Nazareth another 40, from Dan to Beersheba only 140, while the strip between the Jordan and the Mediterranean averages only 50 miles and covers an area no larger than Wales.

Early Inhabitants.

The word Palestine is derived from the Greek for Philistines. Both Abram, about 2000 B.C., and later the Hebrews on their return from Egypt and the desert about 1400 B.C., found many Semitic inhabitants in Canaan, with distinct racial differences, but none of these appear to have been aborigines. The Phoenicians dwelt along the coast north of Mt. Carmel. They were the greatest mariners of their day, and had two worthy ports, Tyre and Sidon. The Philistines, a giant war race, held the southern coast. In the Lebanon of Syria were the Hittites. Through the western range were the Amorites, a highland people. Subordinate Canaanitish tribes were the Perizzites and Jebusites whose threshing floor David seized. East and south of Jordan were the Ammonites, Moabites, Edomites, also up from Arabia, the Midianites and Ishmaelites. God's promise that the descendants of

Ishmael should outnumber those of Isaac has been literally fulfilled, for to-day the Arab far outnumbers the Jew.

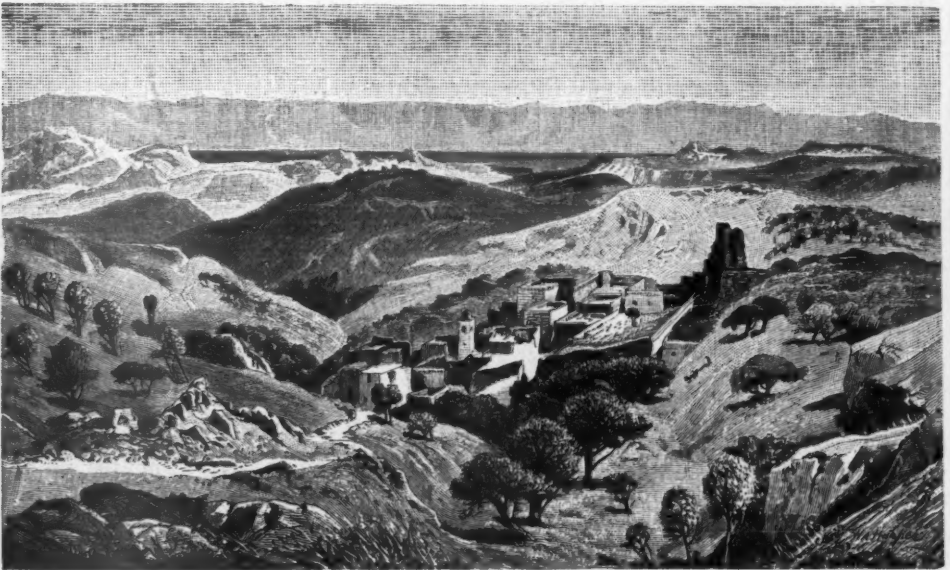
In Egypt.

The sons of Abraham, Isaac and Jacob led a pastoral life, more or less nomadic until Joseph's time when they journeyed into Egypt and settled in the smiling land of Goshen, now known as the Nile Delta. Egyptian records establish the certainty of this sojourn. The term Hebrew means "from yonder" and was first applied in Egypt. The word Jew is from the Greek for Judah. It became the national name in contrast to Gentiles, the Hebrew's own designation for all other nations.

Promised Land.

It is a familiar tale, that of the spies and the Cities of the Plain, of the crossing of Jordan "over against Gilgal" and the storming of Jericho. The remains of these places are seen to this day.

Gradually the Twelve Tribes of Israel settled in their allotted portions of the land and became welded into a strong nation. From the rule of Judges, after two hundred years of agitation, they established Kings—(1091 B.C.), Saul, David, Solomon. Next followed the Rival Kingdoms of Israel and Judah with Jeroboam and Rehoboam as Monarchs, and Samaria and Jerusalem as respective capitals.



Bethany, "Wilderness of Judaea," Dead Sea and Moab from Tower on Mount of Olives

All know the story of Joseph and his brethren, the fat and lean years, the Oppression in Egypt, the Exodus under Moses, the forty years wandering, and finally the entrance into Canaan under Joshua. By a strange providence of the Most High God the mighty leader Moses was not permitted to enter the long-sought land, but found his grave "by Nebo's lonely mountain," hidden in the deep shadows of a vale of Moab.

Foreign Rule.

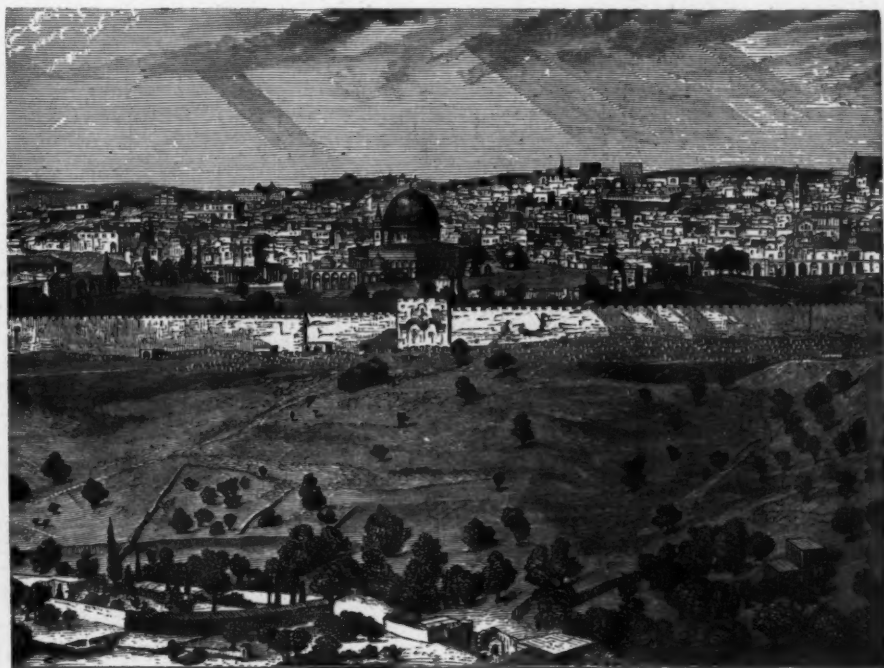
In 722 B.C., Sargon, the Assyrian, carried away captive the Northern Kingdom of Israel, and in 586 Nebuchadnezzar led in bondage to Babylon that of Judah. After fifty years of Judah's exile, Cyrus, the Persian, permitted their return to rebuild the ruined Temple. To Ezra fell the honor of beautifying the new "House of the Lord." In 333 B.C., Alexander the Great terminated the Persian rule. Thus

began the Greco-Egyptian influence in Palestine, which resulted in Jews dispersing to Greek centres in Egypt (notably Alexandria) and elsewhere. The Ptolemies of Egypt controlled southern Palestine for 100 years and enforced pagan worship upon the devout Jews. This so enraged this religious people that they straightway revolted under the High Priest Mattathias and his famous sons Judas and Simon.

The Maccabean rule lasted from 166 to 63 B.C.; until Rome conquered the whole

Frankish Kingdom in the Holy Land, 1099 to 1187. A picturesque feature of the rule was the Order of Knighthood—the Hospitallers of St. John, who tended the sick and the Knights Templars who protected the traveller.

Saladin, Sultan of Egypt, struck the death blow to the Crusaders. He treated his enemies with noble leniency. Though a Mohammedan, he proved an honorable foe. His tomb in Damascus is revered by both Christians and Moslems. About 1500 A.D. this fretted land fell a prey to



Jerusalem, from the Mount of Olives . . .

Levantine coast. Rome dominated until 614 A.D. For 240 years Palestine belonged to the Eastern or Byzantine Empire. Next followed Moslem supremacy. After Mohammed's death, 632 A.D., the Arabs under Omar overran and held both Egypt and Palestine. Four hundred years later Moslem desecration of holy places fired the Crusaders to heroic efforts to wrest these from the Infidel. Godfrey of Bouillon and Baldwin established then a

the Ottoman Turk who misrules unto the present day.

The imperial invader Napoleon, with ambitions of an Alexander the Great, sought to establish an Eastern Empire. He just entered Egypt, then Palestine, where he stormed Jaffa and Acre. But his scheme miserably failed, so again the Prophet's Crescent waved over the land where the symbol of the Cross was once heroically upheld.

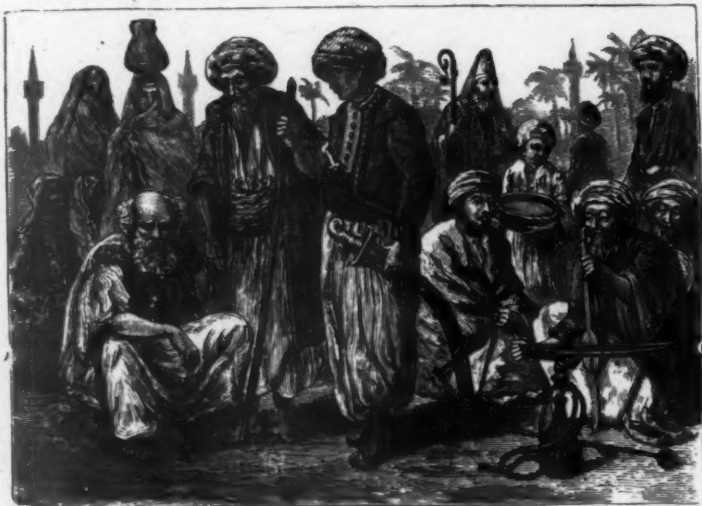
This brief outline gives the general history of Palestine for 4,000 years—from Abram to the present Turkish Governor. Let us now consider the various provinces separately.

Galilee.

Galilee (Hebrew for Circle) is the most beautiful and contained many circular groups of towns. It has the most abundant water supply. The perpetual snows of Hermon, the rock springs of Tabor, fill full the flowing rivers, of which the Kishon and Jordan are the Chief. The clear Lake of Gennesaret or Sea of Galilee, the largest body of water is forever hallowed by association with our

country's resources. The modern traveler is impressed with the fat fields and well-kept vineyards. We took a memorable drive from Nazareth over the Carmelite range to Haifa, nestling by the sea with historic Acre in full view. Ptolemais was the New Testament name for Acre. Here Paul spent a day. In 1104, Baldwin I. captured the town from Saladin, and thence it became the chief landing place of the Crusaders. Napoleon also besieged this brave little town, still so picturesque on its circular bay with the Mediterranean so blue beyond.

Galilee was thoroughly Jewish and well populated in Christ's time, even



Native Types in Palestine

Lord's Galilean ministry. Although small in size, surrounding it were many thriving towns, and busy craft plied from shore to shore. Herod built here his imperial town Tiberias, named after the Emperor.

Throughout Galilee the soil was and is still rich and fertile, wheat and olive oil were sought there even by the ancient Syrians and Phoenicians. This province is more agricultural than pastoral. The vine also flourishes and the fig tree. The Plain of Esdraelon and the Valley of Jezreel bore much the same products when the Hebrew tribes were settled there as they do to-day. Close proximity to Tyre and Sidon gave an outlet for the

though a centre also of corrupt Roman life. The chief ruins are of synagogues, among them, the beautifully carved structure at Capernaum "His own city." At the rabbi's desk Jesus no doubt taught even though the foolish city repulsed him. The subjugation of Galilee was the hardest work Rome had in her conquest of Palestine.

Historic Sites.

The chief are Dan, Caesarea Philippi, Tyre, the Lake cities, Nazareth, and Cana. These are now unprogressive Moslem towns or else a few stray ruins. Dan was the scene of memorable events in Hebrew history. It existed in Abram's

time. Here Jeroboam set up calf worship. Caesarea Phillippi is most picturesquely situated at the fountains of the Jordan and under shadow of Hermon, which is designated as the Mount of Transfiguration. Thither Jesus retreated from the hostility of the Lake towns. To Tyre is attributed an even greater antiquity than to Damascus, although the latter claims to be the oldest inhabited city in the world. Babylon, Ninevah, Thebas, Abydos, are now uninhabited and exist only in ruins. Hiram, King of Tyre, supplied cedars of Lebanon for David's pal-

of the silver moon. The Gadarene Hills still sink abruptly to the Lake. The slopes of Hattin, identified as the Mount of Beatitudes, are yet softly green. No more lovely setting was there for the Saviour's precious utterances in the Sermon on the Mount, which still teach mankind true Christian socialism. Bethsaida, the little fishing village, near which the five thousand were fed is now a tangle of grass and reed. Safed, a Turkish post, may be the "city set on a hill." Of all these towns, Nazareth bears closest resemblance to by-gone days. How tender its memory



The Field of the Shepherds

ace and Solomon's Temple. Ahab married a Tyrian Princess. As the chief city of Phoenicia it was noted for various merchandise and purple dyes.

Lake Cities.

True to Christ's "Woe unto me", the towns about the Lake of Tiberias are now in ruins. Capernaum and Chorazin are no more. Magdala is a neglected village. Tiberias, which Jesus seems never to have visited, has fallen from its high estate. All splendor has departed from the erstwhile flourishing cities. The only splendor that remains is the glory of the rising and the setting sun, and the clear light

of the gentle Nazarene lad and the "silent years." Mary's well is undoubtedly the same, being the only water source in the vicinity. The reputed carpenter's home is there with rock-hewn workshop. An old Franciscan hospice and a splendid Protestant Mission are the only evidences of modern conditions.

Jewish Wedding.

We must not forget, however, the quite modern wedding which took place not in the Synagogue, but in the tiny crowded square in front. Such an event is always a noisy occasion in the Orient. We were first attracted by sounds, not of music,

but of noise, although so-called musical instruments were being played by a procession of young men. Those who had no instruments used their voices, hands and feet. The stamping and clapping almost outnoised the "music." Presently our tourist band joined the procession and soon we, too, were clapping hands. This pleased the natives, who bowed and laughed at us. On reaching the synagogue we found we had escorted only the groom and we thought of the Bible description of going forth to meet the bridegroom. Next, we hurried off with the musicians to bring the bride. She was arrayed in shiny white satin and stiff gauze veil, fancy gold slippers and tinsel head dress. Her maidens were in bright colors with gay sashes. During the picturesque Jewish ceremony these were stretched to form a canopy, above which was a faded purple velvet awning. One curious circumstance was the occurrence of a brawl among the on-lookers in the small crowded square. Soon the whole assemblage was divided into factions. This noise and tumult seemed most characteristic of the excitable Arab and Turk.

With memories of the Nazareth wedding we could better picture the scene in Cana. Although two thousand years ago, no doubt, many features were similar, for the East is unchanging. Down a hillside from Nazareth, slumbering Cana lies nestling in the grass of the field. The supposed site of Christ's first miracle is shown with the traditional water jars. One cannot but contrast the children of these two towns. The Mission influence of the former has taught the little girls a sense of decorum, made them cleaner and given to their needlework more skillful finish. In Cana the children are rude, untidy and their netted work is carelessly done.

The Plain of Esdraelon

stretches in pleasant undulation to the sea. It is holy and historic ground. Dean Millman describes it as "the world's most famous battle ground." Armies of many nations have stained its fields. It was the great war path on the trade route between Asia and Africa. Crusaders' blood, also, has drenched this soil. The principal sites are Mount Carmel, with

Elijah's Cave and the famous Carmelite monastery, Mount Gilead, with its precious balm, Gilboa where Saul was defeated by the Philistines.—Dean Stanley says: "This is the most mournful name in all the military annals of the Chosen People."—Endor, where Saul sought the witch's wisdom, Nain associated with the touching story of the widow's son, Tabor ascribed as the Mount of Transfiguration, Jezreel cursed with the iniquities of Ahab and his wicked Queen Jezebel. Many more places could be mentioned, but we must hasten to

Samaria.

This district of scattered hills became the seat of the Northern Kingdom under Jeroboam, 975 B.C. It possesses one of the most ancient cities in the East. Shechem is much older than Jerusalem. It and the City of Samaria lay in the fat "barley vale." Thither came Abram and Jacob, and later, Joseph, in search of his brethren, pasturing their flocks in the plain of Dothan. Joseph is said to be buried here in "the parcel of land his father bought." On the high road is Jacob's well, where Jesus talked with the woman of Samaria and revealed to her the water of Life.

Ancient Samaritans.

Mount Gerizim, overshadowing Shechem, is one of the oldest shrines in the world. Here rested the Ark of the Covenant until Joshua removed it to Shiloh. About 432 B.C. the Samaritans erected on this Mount their Temple as a rival to the one in Jerusalem. The Jews condemned them for mixing with heathen and refused their help on the restored Solomon's Temple. To this day the feud exists—a Jew has no dealings with a Samaritan. In Shechem (modern Nablous) dwell the 160 survivors of this old sect. These few sad souls continue their ancient religion. Their rites and ceremonies resemble the Jews', although they reject the Talmud and all parts of the old Testament save the Pentateuch. The oldest Samaritan Codex is preserved in the tiny white-washed synagogue, but the aged High Priest showed us a later parchment. He was a venerable old man in white robe and flowing beard, in stature and visage like unto Angelo's mighty Moses.

City of Samaria.

As Shechem was not easily defensible, Samaria (meaning watch tower) was chosen at the capital. It continued such until the Assyrians carried Israel into captivity, 722 B.C. Here Jezebel slew the prophets of God and Jehu the priests of Baal. Jeremiah condemned the prophets

cabaicus. A century later it was given by Augustus to Herod the Great, who named it Sebaste (Greek for Augusta). His colonnades are all that remain, their rich carvings hidden by tall rank grass. As with Capernaum, so with Samaria, hardly one stone now stands upon another. Nature's ramparts are all that abide.



*Oh, little town of Bethlehem,
How still we see thee lie!
Above thy deep and dreamless sleep,
The silent hours go by.*

of Samaria, saying: "I have seen folly among them." In 331 B.C. Alexander the Great made Samaria the capital of his Greek province, but the citizens burned the Governor. In punishment the town was filled with brutal Macedonians. In 120 B.C. came its memorable destruction by Hyrcanus, son of Simon Mac-

Tradition places John the Baptist's death here, also his tomb.

Closed in by protecting hills stands the little frontier Town of Beiten, the ancient Luz, changed by Jacob to Bethel (House of God). Here he had his dream. It was a hapless town, belonging sometimes to Ephraim, sometimes to Benjamin, but ulti-

mately became the religious centre of the Northern Kingdom. Here Samuel judged Israel. Bethel is never mentioned in the New Testament.

Judaea.

A vast difference exists between fertile Samaria and stony Judaea, yet the latter possesses a fascination, austere though the landscape may be, that the former lacks. This old Kingdom of Judah is a land of many valleys and rocky ridges. As we rode across country we thought Isaiah must have had this region in mind when he wrote, but the valleys are not yet exalted, nor are the rough places smooth. The crooked roads are far from straight. They wander down the hill-sides in many twists and turns and with an accumulation of stones ever since Judah's time. However, credit must be given for the road improvement recently made. A splendid level highway, well graded, now runs from Jerusalem to Jericho (20 miles).

On the Road to Jericho.

Wonderfully interesting is this journey, both in scenery and in life. The landscape is totally new to the Western traveller and holds him with a solemn charm. In the distance stretch the Mountains of Moab, a long and regular range with the broken peaks of Nebo and Pisgah rising silent and grey. In the gloaming they stand like a mighty purple barrier. Their far-away solitude and sacred mystery of sepulchre filled us with strange melancholy. The nearer hills spread in every direction. Stone-made terraces, representing careful toil, make place for the vine and the fig and olive trees. From the rock-grown herbage the sheep graze, each flock with its attendant shepherd. His rude sheepskin coat or camel's hair mantle are precisely like those worn in patriarchal days. Indeed, the curious horsehair crown, pressed on the head to prevent the shawl blowing off, is just like Jacob wore.

Here and there oxen drawing a primitive wooden plough upturn the stony earth. The ploughman carries his goad or prick, whence the words, "It is hard to kick against the pricks." The stubborn soil permits of but sparse vegetation, however a little grain is grown. Thoroughly Biblical is the scene—a distant

sower casts his seed, some falls on rocks, some by the wayside.

Bedouins.

On the lonely road to Jericho, Arabs, Turks, and Jews pass, trudging on foot, while mounted on Arab horses come occasional groups of Bedouins. Their ample robes and white head wrap, with bright striped scarf, make them the most picturesque figures in Palestine. Their bearded faces are handsome, the nose aquiline, the complexion swarthy, the dark eye keen and savage. They are ever alert and always carry arms. We met a train of these dusky sons of the desert returning to their tented homes across Jordan in the land of Moab. They had gone to Jerusalem to barter horses and buy food. They are true Ishmaelites, their hand against every man.

Dead Sea.

Down to the Jordan and the Dead Sea is an amazing descent, although only 15 miles as the crow flies. Jerusalem is 2,500 ft. above the Mediterranean and the Dead Sea is 1,293 ft. below. Therefore to consign one's enemy to Jericho is surely to cast him to a remote place. The desolation of this arid plain is complete. The lonely shores of the Dead Sea present no sign of life, and are overshadowed by the purple gloom of the Mountains of Moab. A mysterious doom pervades this desolate region. The seven-time salty sea (46 miles long by 10 wide), one-quarter of whose bulk is mineral, is 1,300 ft. deep, making a depression of 5,000 ft. below Jerusalem. It has no outlet and contains no life. In summer the heat is intense, causing immense evaporation which explains the great density of the water.

The Jordan Plain

is a baked alkaline region. Here were situated the Cities of the Plain, to which Joshua sent spies who returned with wonderful bunches of grapes. At one time a system of irrigation made this desert blossom like the rose. Of late years a small section has been reclaimed and is richly productive. With a more progressive Government than the present Turkish, this land would become as in its "palmy" days. The ruins of Jericho show the old Canaanitish city, also the Roman one which Antony gave to Cleo-

patra. Later, Herod the Great built here his famous winter palace. In this "City of Palms" he miserably died.

The so-called Mount of Temptation overlooks the Jericho valley. It is of grey limestone jagged and bare. A solitary monastery crowns its dreary summit. Our cavalcade of carriages wound slowly up the rugged road. Deep gorges yawned on either side. Through one tremendous chasm ran the brook Chireth associated with Elijah and the ravens. Further on is the Good Samaritan Khan, a low building of rude stone with a large arcaded enclosure. Here the traveller or pilgrim shelters his camels, horses, or asses. This is a good type of the caravansary found in all Arab lands.

Wilderness of Judaea.

Toiling up and up, and looking yonder at the neglected plain far below, our thoughts turned to the past when this forsaken place was filled with life and wickedness. Surrounded with a panoramic view we returned "in the way going up to Jerusalem." Almost the entire journey can the city be seen—a city set on a hill. The wilds of Judaea are drear and lonesome, but our hearts warmed at sight of the domes and towers of the City of Zion. The bleak landscape, with memories so hallowed, grips the imagination and stirs the soul. Desolate Judaea is unique in its sombre grandeur and its abiding hold on the human heart.

Round About Jerusalem.

"Hilly bulwarks" surround the old walled city. It stands on an exalted plateau. Below are the valleys of Jehoshaphat, Kedron and Hinnom or Tophet, the "Place of Fire" (Jewish Gehenna). To the east the Mount of Olives rises steeply to a sacred summit, the Mount of Ascension. From this hillside the sorrowing Saviour looked out upon the city he so much loved and yearning over it said: "Oh, Jerusalem, Jerusalem, how oft would I have gathered thy children together even as a hen gathereth her chickens under her wings, and ye would not." From this hill began the triumphal procession on the first palm Sunday. Loud rang Hosannas to the Son of David. A few weeks later the Son of God ascended from this holy Mountain.

As if from fear of profaning Olivet, Solomon's Mount of Offense rises more lowly. Like a deep gulf fixed between is the Valley of Dry Bones. The whole region is a vast sepulchre. Tombs of prophets, priests and kings lie scattered and unnumbered. Jews, Gentiles and Moslems to the present day carry their dead to this ancient funeral vale. Many aged Israelites return to die in the "City of their Solemnities" and to be buried with their fathers. Mohammedans and Hebrews hold to an old superstition that the final Judgment will take place in the Valley of Jehoshaphat. The mountains recede to make room for all the world, the quick and the dead. The righteous will pass over a wire stretched from Moriah to Olivet. Jesus Christ and Mohammed will each support an end. The saved will be gathered up to Heaven, the condemned will rot in the dark abyss.

Bethany.

On the slope of Olives is Bethany, now a squalid Moslem village, well exemplifying its Arab name "house of poverty." Lazarus' tomb may not be true, but of a truth the sisters lived here and thither their Master loved to come. Other tender associations has this little town. Simon the leper's house is lost to view, its holy guest has departed, the alabaster box is broken, but the imperishable memory remains. Still more sacred comes another record, "And he led them out as far as Bethany, and he lifted up his hands and blessed them, and it came to pass while he blessed them he was parted from them and carried up into Heaven." Note the simplicity and yet the majesty of the language. There are those who call this Transcendence mere tradition, but is it not a fitting end for the Son of God!

Gethsemane.

Only forty-odd days before He had led them but a mile distant to another quiet spot, shut in from the noise and dust of the highroad, with no sound save the shiver of olive leaves and the murmur of aged monks. Authorities agree it is the same Garden of Gethsemane which to-day is reverently guarded by pious Franciscans who tend the simple flowers and protect the ancient olive trees now gnarled and bent. They make a daily round of the stations of the Cross and

thus perpetuate the memories of the Passion.

No poet has sung more sweetly of the Garden than Sidney Lanier:

"Into the woods my Master went,—
Clean forespent—forespent:
Into the woods my Master came—
Forespent with love and shame.
But the olives they were not blind to
Him:

Their little gray leaves were kind to
Him:

The Thorn Tree had a mind to Him:
When into the woods He came.

"Out of the woods my Master went—
And He was well content:
Out of the woods my Master came—
Content with death and shame.
When death and shame would woo Him
last,
From under the trees they drew Him
last;
'Twas on a tree they slew Him last
When out of the woods He came."

(To be continued.)

Friends, it is all so precious, so sacred, one's heart wells up and overflows. Unrealizing is the man who can visit these scenes and not be quickened to a sense of the depth of meaning of the mighty purport of that Life Incarnate, the "Word made flesh that dwelt among us."

Lepers.

Outside Gethsemane's gate is one of the saddest sights on earth. Gathered there, as if to appeal to the stranger when in a tender mood, sit rows of lepers. Their condition is pitiful, their cry heart-rending. They uplift wan faces and outstretch wasted stubs of hands. In shrill falsetto voices do they plead for alms. Their long, thin arms and faded eyes haunt one forever. Asylums are provided, but when able these poor outcasts prefer to beg by the roadside. Doomed to the life of a beggar! The East knows this curse full well. For some there is no other lot than to sit in the dust through a life time and beseech for bread. May God pity the beggar to whom a cruel fate has denied all power to work.



The Author in Jerusalem in Rebecca Costume

Editorial

THE TUBERCULOSIS PROBLEM.

Within the past six months, up-and-down the continent of North America, yes, and across the seas as well, a well-known monthly magazine has been carrying a story entitled "The Doomed Tenth," from which the following extracts are taken:

I.

One hundred and eight thousand people died of tuberculosis in this country (the United States) last year because the doctors could not tell what was the matter with them until hope of their cure was gone; about that many will die this year for the same reason.

II.

"Catch the incipient consumptive early." Certainly, by all means, catch him early; if you don't he's a goner; but how is he to be caught early when the physicians who must do the catching do not know incipient tuberculosis when they see it?

III.

Instead of sending people in the early stages of the disease who can be cured to the hospitals for incipients, the doctors fill the hospitals with hopeless cases because they do not recognize any other kind of case.

IV.

It is a terrible fact, and a sad commentary upon the medical profession, that its members cannot find, while it is curable, an age-old disease which kills one-tenth of all the people who die in the United States every year.

V.

So, as you will see by this article, we do not need a "cure" nearly so much as we need competent doctors; we will have tuberculosis always, and you cannot afford to trust the average physician.

The Public Health Journal, because of its fairness, published in its September issue an article. "My Personal Experience of Tuberculosis," written by a lady who knows what tuberculosis means and what a terrible fight it is to conquer it. This is but one side of the story, for every story has two sides just as surely as it takes two participants to make a quarrel. Your attention is called to a letter in the Correspondence Corner from a physician of large experience. This introduces us to the other, and we believe the saner and the more correct aspect of the problem. We contend that the people themselves are more to blame for incipient phthisis developing into the graver and fatal stages than any group of physicians wherever found. There are hosts of people who consult a doctor once, and because they, forsooth, fancy that the doctor has not acquitted himself according to their preconceived notion of an omniscient individual who can pronounce the name of their malady at a glance, never return, and thus do not co-operate with the one who desires to do his very best for them. Perchance they drift into the hands of some charlatan who saps their money while their chances for a cure are rapidly passing away. Then there are others who will not pursue any course of treatment outlined, believing that there is absolute efficacy in some drug swallowed by the dram or ounce. When will people learn that the remedies for consumption which Nature provides, are the best, and that their safest way is to co-operate with the doctor in any rational method. We will not have it that the physicians are to blame. There may be here and there members of the profession who are culpable, but their number is very small indeed, compared with those highly trained and competent. We repeat that the people are to blame for neglecting the ordinary A B C's of the Laws of Health; for not

consulting their physician at regular intervals relying upon his sympathetic advice and treatment; for running hither and thither seeking for some "cure-all" advertised widely with glaring headlines; and, above all, for not co-operating with the only body of men who are trained to desire above everything else a "mens sana in corpore sano," and in this we include our brothers, the dental surgeons. The public does not know, but it ought to know, that there are certain definite and inflexible rules of health which must be observed. Nemesis follows close upon the heels of him who breaks even the least of them. All physicians are agreed that preventive medicine is the great division of medical science to-day, and those more closely associated with this field are engaged in a daily endeavor to teach the people, the why and the how of the Laws of Health. Is it the fault of the doctors that the people will not heed but pass by on the other side with supercilious glances, until stricken, they learn the folly of their aloofness? We say no! emphatically no! Let us urge, then, a better co-operation between the physician and the patient, and, better still, between the well man and the doctor, so that quack "remedies" and charlatans will no longer flourish in a land where reason reigns.

THE PHYSICIAN AS POET.

Some months ago, in our August issue, we wrote about the number of medical men who had become prominent in the realm of literature. This was occasioned as you will remember by the appointment of Dr. Robert Bridges as Poet Laureate. In the course of that editorial we referred to a certain Toronto physician whose next published volume of poems was destined to take a foremost place in the poetry of the English-speaking world. This volume has now come to us. It is entitled "Love and the Universe," from the soul and by the pen of Dr. Albert D. Watson. The title of the first poem in the collection gives the title to the whole volume. This poem is one of supreme conception and magnificent workmanship. Its beauties are apparent at a first reading, but its sublime truths are revealed more and more as one digs into the depths of its comprehensiveness.

The "Immortals," take, perhaps, half the volume. In these monologues we hear the "voices" of the great dead, Abraham, Caesar, Copernicus, Leonardo, Luther and many others, as the poet has portrayed their thoughts and attitudes. The volume has only just come to hand and so we shall hope to make a more extended review at some later date. We are able to say that this latest volume of Dr. Watson's is a true contribution to the very best poetic music of the ages. His poetry will live and will be loved by an increasing number of earnest souls who will appreciate more and more, as they study, the poet's lofty aim. Strange to say, the mass run to purchase a volume of verse, or rhymes, or jingles, which become popular or notorious, whichever you will, and sales mount up as though on eagle's wings. This volume of poems by Dr. Watson, is so far superior to such ephemeral rhyming that it cannot be spoken of seriously in the same breath. As a gift at this Christmas season, it will bring the recipient, not only present pleasure (for it is a dainty book, well gotten up), but lasting joy in the study of the best poems that have appeared by a Canadian author in many a day. Dr. Watson is an efficient physician, a true poet, a good man. The Foreword to this beautiful volume is from the pen of Katharine Hale, and is as exquisite a bit of introduction as we have seen.

GREETINGS.

We cannot refrain from sending out at this season to all those who have helped us to make this past year an eminently successful one, our heartiest greetings. We are looking, as we know you all are, to a larger and a better success next year.

THE FOURTH CONGRESS.

Too often the annual meeting of any association is not spoken about until the time draws near for its consummation. We are not going to make that mistake this year and are planning from month to month to present some interesting phases of the life of the Twin Cities, Port Arthur and Fort William, where our next congress is to be convened. We want you to become acquainted with them. We desire that you shall visit them next September. This will be a good New Year's resolution.

Book Reviews

*A Good Book is the Previous Life-Blood of a
Master Spirit Embalmed and Treasured.—Milton.*

Conservation of the Child.

We do not remember having seen a book upon this subject which pleases so much as this. The author calls it a *Manual of Clinical Psychology*, presenting the examination and treatment of backward children, and we have found it a most practical volume. It was written as the outcome of experience gained in the Psychological Clinic at the University of Pennsylvania, which is claimed the pioneer in the United States. We have gone over its pages carefully several times and besides its eminent practical flavor we find that it opens up to us vistas in this child problem which we can never hope, we are afraid, to satisfy. It guides us to numerous text-books and treatises which only amplify what has been so splendidly set forth in its pages, but since there is a limit to the size of a volume, some of the topics have been of necessity merely outlined. On other subjects the treatment has been minute and extensive. Being from the pen of a psychologist, the medical examination has been merely mentioned and its importance noted, but the mental examination is complete. We were delighted with the chapter upon moral deviates, that class with which it is so difficult to deal and whose relapses

are so frequent and discouraging. Nearly half the book is taken up with the "Classification of Clinic Cases," and this is as it should be, for the practical side of the work appeals most strongly to one who meets these cases daily in clinical work. If we are to conserve anything at all in this generation it must be the child life of the community. Any light that we can have thrown upon the problem or any help that may be offered, let us have it now and Dr. Holmes deserves the gratitude of child-welfare workers for having presented to us such a masterly exposition of practical methods of work. The book ought to be in the hands of everyone interested in the child. Mothers, who read, and think, and ponder, will find this volume most instructive, and it would be a blessing if fathers knew something of its value.

THE CONSERVATION OF THE CHILD—*A Manual of Clinical Psychology presenting the Examination and Treatment of Backward Children*—By Arthur Holmes, Ph.D., Assistant Director of the Psychological Clinic; Assistant Professor of Psychology, University of Pennsylvania—J. B. Lippincott Company, Philadelphia and London, 1912—350 pages—Price \$1.25 net.

BOOKS RECEIVED.

The following books have been received, and the courtesy of the publishers in sending them is hereby acknowledged. Reviews will be made of these volumes from time to time.

FOREST PROTECTION IN CANADA, 1912—By Clyde Leavitt, M.Sc.F., Chief Forester, Commission of Conservation and Chief Fire Inspector, Board of Railway Commissioners—Published by the Commission of Conservation, Canada, and printed by the Bryant Press, Toronto, 1913.

ANNALS OF SURGERY—A monthly review of Surgical Science and Practice—December issue—Anaesthesia—J. B. Lippincott Company, Philadelphia—50c.

LOVE AND THE UNIVERSE, THE IMMORTALS AND OTHER POEMS—By Albert D. Watson, with Introduction by Katharine Hale—Toronto—The McMillan Company of Canada, Ltd.—Price \$1.25 net.

Ideas and Inventions

It is gratifying to know that there are here and there, members of the medical, engineering and dental professions who are engaged on ideas which develop oftentimes into inventions. They are of very great practical importance and in many instances are calculated to supply a long felt need in the Public Health field. We have pleasure in presenting one of these, and we should be glad if any others who are working on new ideas would send the completed descriptions to us for publication.—*Editor.*

THERMOMETERS THE CAUSE OF NUMEROUS DISEASES

By M. A. KENDRICK, M.D., C.M., (Tor.)

Wilcox, Sask.

I believe that numerous diseases are carried on clinical thermometers owing to the fact that many physicians do not take the necessary precautions to disinfect this little glass instrument. The dipping of the thermometer in cold water or wiping part of the surface with absorbent cotton, is not sufficient to cleanse. It must be immersed for at least 8 minutes in carbolic acid, say 85 per cent., to destroy the more resistant bacteria and their spores. The public mind is slowly awaking to the fact that numerous communicable diseases are carried in this manner and a physician or nurse who does not disinfect the thermometer, is a disease "carrier," and the time is well nigh when the lay public will demand from all the profession this hygienic principle.

To overcome the difficulty of properly sterilizing the thermometer, I have devised a thermometer pocket case. The following diagram will illustrate its use:

Fig. 1.

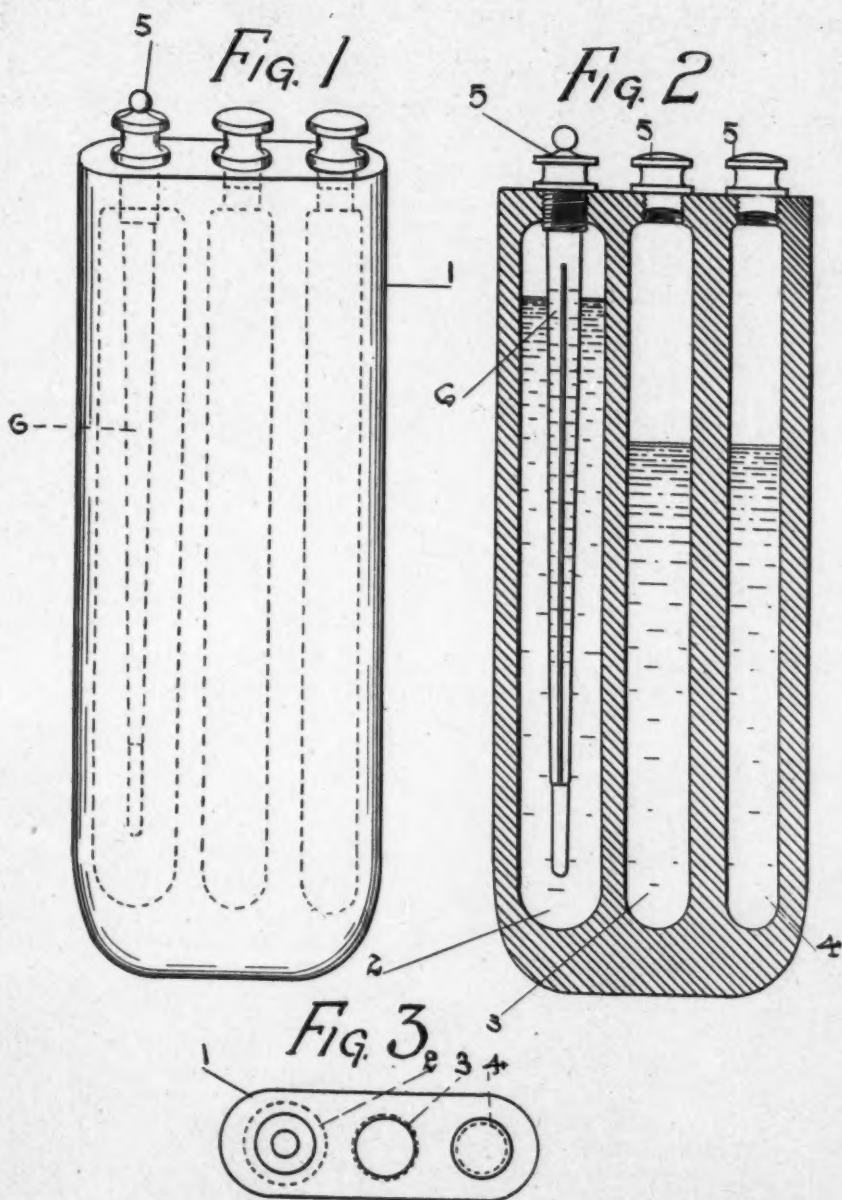
Fig. 2.

The case has three chambers and also three thermometers. In 4 is kept a rectal thermometer in a suitable antiseptic. In

3 is carbolic acid, say 85 per cent. In cell 2 is a non-poisonous antiseptic, as, for example, euthymol. The thermometer is taken from cell 2 and placed in the patient's mouth, and while the temperature is registering, the physician or nurse takes the thermometer from the carbolic, washes, wipes, and places it in the euthymol to further cleanse after exposing the thermometer to unsterilized water. The one is now taken from the patient's mouth and placed in the carbolic. The patient sees the physician cleansing the thermometer and knows that this instrument is clean. I believe that the euthymol will destroy the typhoid or diphtheria germ in less than 30 seconds.

The individual drinking cup is being adopted by different countries, and most of the people travelling are not ill, yet the thermometer goes from one diseased mouth to another.

The case can be made neat and small, also quite thin so as not to bulge the physician's vest or the nurse's waist pocket.



Meetings and Reports

FOURTH ANNUAL CONGRESS OF THE CANADIAN PUBLIC HEALTH ASSOCIATION FORT WILLIAM—PORT ARTHUR 1914—SEPTEMBER—1914

It is not one moment too soon to call attention to the Fourth Annual Congress of the Canadian Public Health Association, and to lay plans for a large and profitable gathering. For it is a fact that the amount of profit derived from such a Congress, both for the individual and for Canada, as a whole, will be in proportion to the amount of energy put into it by everybody interested. And everybody ought to be interested. There isn't a doctor, or lawyer, or minister, or engineer, or social worker—and we might go on to recall every trade or profession within our ken—who ought not to be an interested party in Canada's National Welfare. There are hosts of problems awaiting solution, and just because this is Canada's century, these problems will not become easier, but harder, that is, unless we see to it that now we lay sane and healthy plans for the future. Since the inception of the Canadian Public Health Association some things have been accomplished and we are thankful for a sympathetic and willing Federal Government, but only a be-

ginning has been made after all. We do not believe we need ask your pardon for saying that in this Association we have the ideal medium for an interchange of opinions between the people and the Government along national welfare lines. And so we repeat that we want a great number of people to so plan that they shall meet in the Twin Cities next September, having thought through various evils and their solutions ready to present their findings to as fine a body of Canadian men and women as gather anywhere from year to year in this broad Dominion.

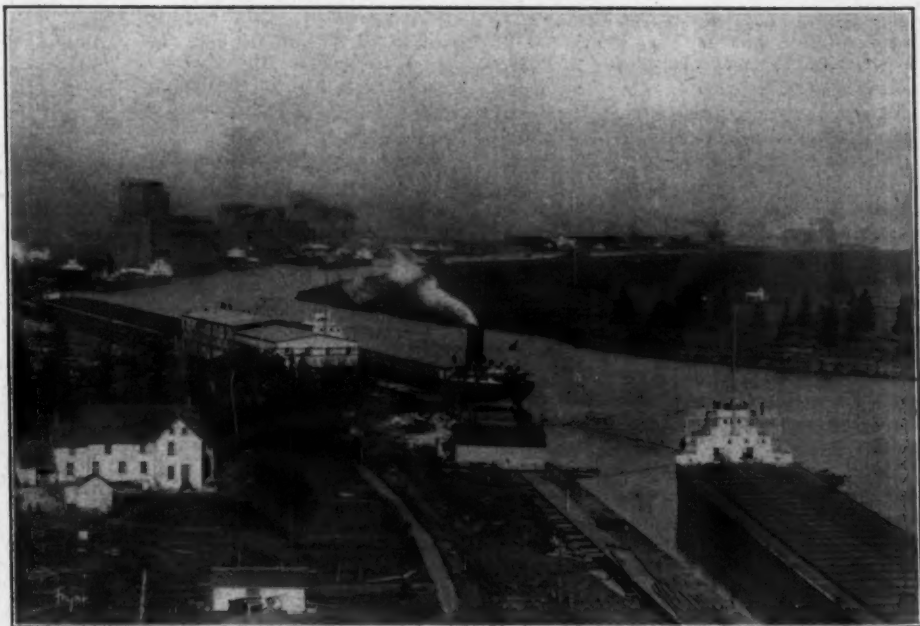
Fort William and Port Arthur stand where east meets west. They are the most northwesterly point on the Great Lakes. They are the Golden Gateway to the glorious wheatfields of the Great West. Perhaps you may not have thought of it in this way, but the Twin Cities are actually not only in the centre of Canada, but also in the centre of the North American continent. Thus no more fitting point could have been chosen for the next Congress. We are showing this month views of Fort William and Port Arthur. We

PORT ARTHUR



A BUSY CORNER

FORT WILLIAM



A PORTION OF THE HARBOUR

shall from month to month have something interesting about their history, for few places in Canada have been encircled by so much romance as they. Gitche Gumee, the big sea water, has laved their shores when the redskin held undisputed control. Lake Superior now carries to and from their doors the commerce of a mighty Empire. It will be worth while to pay a visit to these cities in the fall of 1914.

The Canadian Medical Association Meeting.

It will be of interest to the profession, generally, to know that the next meeting of the Association is to be held in St. John, N.B. It will extend over four days—the 7th, 8th, 9th, and 10th of July, next.

St. John has excellent hotel accommodation, and ideal weather in the summertime. The thermometer rarely goes above 70 degrees, and the nights are refreshingly cool and invigorating. Preparations for the meeting are already well under consideration. The profession

of the city is working as a unit to make the meeting one of the most successful ever held by this Association.

Medical men throughout Canada and elsewhere, contemplating a holiday in which pleasure and profit may be combined, cannot do better than arrange to go to St. John next July.

**Royal Sanitary Institute.
(B. C. Branch.)**

A British Columbia branch of the Royal Sanitary Institute of London (Eng.), was formed in Vancouver at a meeting presided over by Dr. F. T. Underhill, Medical Health Officer of Vancouver. The branch is to continue the work of a few energetic sanitarians who last winter gave a course of lectures to instruct men qualifying as sanitary inspectors. It was at the same time decided to hold a Sanitary Congress, at both Victoria and Vancouver. The Congress at Victoria took place on the 22nd October, and by invitation was held jointly with the meeting of the School Trustees' Association, to whom warm

thanks are due for their friendly help to the young and struggling society.

The afternoon meeting was held under the presidency of the Vice-President of the Trustees' Association, Mr. White. Dr. Home detailed to the meeting the work and aims and achievements of the Royal Sanitary Institute, and Miss Alice Ravenhill, the one lady Fellow of the Institute, gave an address on "Six Points in School Hygiene." This was closely followed and subsequently discussed at length. Miss Ravenhill is an excellent lecturer, with wide and exact knowledge of her subject, great power of expression and a clear enunciation. Dr. Wasson, School Medical Officer of Victoria, read a paper on "Physical Defects Arising Before School Life," and Mrs. Peter McNaughton, of the Vancouver School Board, discussed "Health as an Asset to the Student, and Our Methods of Protecting It." So the meeting had wide support and gained the warm thanks of the School Trustees.

The evening meeting of the branch was held without the co-operation of the School Trustees. The Bishop of Columbia, the Very Rev. J. C. Roper, was in the chair, and prefaced the proceedings with some very pertinent remarks on the importance of sanitation to the Western country. Then Miss Alice Ravenhill told how health protection had originated in savage, early civilized (Assyria, Egypt) and modern States, and on Public Health legislation in British Columbia. Dr. Home (Victoria), followed with a paper telling "Why Children Die," insisting on the importance of giving children plenty of air about them to save them from consumption and the duty there was laid on parents of shielding the children from all infectious diseases. The Royal Sanitary Institute, British Columbia branch, has made a successful start.

Meeting of Medical Officers of Health of Essex County.

By the President, Dr. J. W. BRIEN,
Essex, Ont.

On November 4th, the Medical Officers of Health of the County of Essex met in Windsor in response to a request of Dr. D. B. Bentley, District Officer of Health, for the purpose of organizing and laying plans for future work.

There were present twelve Medical Officers of Health out of the twenty who hold that office in the County. They organized by appointing the following officers:

President—Dr. J. W. Brien, Essex.

Vice - President — Dr. P. Poisson, Tecumseh.

Secretary - Treasurer — Dr. J. W. Beasley, Sandwich.

Committees were appointed to draft by-laws, provide programmes, papers, etc., for meetings.

Meetings will be held in future the third Friday in January, April, July and October, making them quarterly.

At this meeting four papers were read: one by Dr. H. R. Casgrain, of Windsor, on the Public Health Act and its amendments and proposed additions; one from Dr. Beasley, on the duties of the Medical Officer of Health in towns; one from Dr. P. Poisson, on the duties of the Medical Officer of Health in rural municipalities; one from Dr. J. W. Brien on sanitary conditions in the County of Essex. All papers were well received and thoroughly discussed, and the greatest enthusiasm prevailed.

Too much cannot be said about the great work Dr. Bentley is doing in this district. He is most enthusiastic, thorough and painstaking. His pleasing manner fits him so well for handling difficult problems and obstinate people without creating friction.

It is understood that this is the first county to organize such an association, and, it is hoped, will be the means of bringing about a better understanding and better feeling among the physicians and Medical Officers of Health, and of very materially improving the sanitary conditions in the county in the near future.

The meeting expressed the belief that the members of the Association working in harmony with one another, working in harmony with the District Officer of Health, and, through him, with the Provincial Board of Health, could accomplish greater good for the prevention of disease than by working individually.

The Association is known as "The Association of the Medical Officers of Health for the County of Essex."

Correspondence Corner

THE TUBERCULOSIS PROBLEM

To the Editor,

The Public Health Journal:

Sir,—In the contribution by Marion Marshall in your September issue she refers to the lack of care exercised by certain physicians in examining patients with ordinary colds which so frequently are followed by tuberculosis. I have refrained from writing before as I hoped some of our greater lights would take the matter up. I have been practising in this village for over twenty years. The drives are long and the roads often very heavy, especially at the season of the year when sickness is most prevalent. Frequently, when you get back cold, tired and hungry, from a heavy trip, probably up half or all the night, you find several persons in your waiting room. I make as careful an examination as I can under the circumstances, and in all cases of "colds" I tell them to come again in a week or so. The medicine and treatment usually relieves the condition and they frequently do not report again, or, at least, not for several months. In the latter case I often diagnose incipient phthisis by means of the microscope. If I tell them what I have found they not uncommonly go to another physician who does not use the microscope in the hope he will say it is an ordinary bronchitis. In other words, they cheat themselves, for in rural districts it is looked upon more or less of a disgrace to acquire consumption. If the patient accepts the diagnosis my next difficulty is in introducing proper ventilation, hygiene, etc., in the home. It is a notorious fact that patients often feel they have done all in their power to get well once they have called in the doctor; it is too much trouble to carry out all his instructions. On this account valuable time is often lost. One may ask why I do not use the microscope in the first in-

stance? I frequently do, but the fees are small and in nine out of ten cases it is an ordinary cold which clears up in a few days. Under the above conditions I think the average physician is doing about all that is possible. If the people could be educated to consult their physician every six months, or at least once a year as a prophylactic measure, many diseases could be checked.

Your publication is the most practical and up-to-date of any I have seen. I hope every physician in Canada is reading it. Enclosed is my subscription for 1914.

Yours sincerely,

ONE
WHO
MAY
HAVE
ERRED.

BOUQUETS

New York City, Nov. 29th, 1913.

To the Editor The Public Health Journal,
Lumsden Building, Toronto, Canada:

Dear Sir,—Please permit me to express my appreciation of "The Public Health Journal." I owe to it a broader point of view and would not be without it. I am,

Yours very truly,

In lieu of a letter, for as you know doctors are proverbially bad letter-writers, one physician sent us three dollars, in answer to our request for renewal, and at the bottom of our form, wrote these words, "The November Number was a dandy." The promptness, the money and the praise were all heartily welcomed.

POINT OF ATTACK IN SEX EDUCATION

By THOMAS M. BALLIET, Ph. D.

Dean of School of Pedagogy, New York University.

Abstract of a paper read at the Fourth International Congress of School Hygiene.

How Far Will Public Sentiment Support Public Sex Instruction?—What can Be Done in the Public Schools.

The necessity for sex education in some form, in case of the young as well as in case of adults, has become, within the last half-dozen years, very generally recognized, and it is extremely important that we determine its matter and method and the order in which it should be undertaken. Shall we begin where it is probably most needed, or, at all events, where it is needed on the largest scale—in our public schools with their nineteen millions of young people?

We must first of all bear in mind that we are here dealing not only with a scientific and an educational question, but also with an administrative one. We must take into consideration not merely the need of such instruction, but also the conditions necessary for giving it effectively. The two main conditions are the preparation of the teachers and the public sentiment of the community.

It is needless to say that the teachers in our public schools are not at present qualified to assume this responsibility; they have not received the necessary training either in the matter or the method of such instruction; and to introduce it at present into the elementary schools, beyond certain forms of it to be discussed later, would lead to much blundering of a serious kind which would be likely to create in the community a revulsion of sentiment against it that would defer the day when it can be given effectively.

Points of Attack.

The first point of attack should be the parent, and such instruction, as it is for the common good of the community, should be provided at public expense and should be in charge of the Board of Education. Another point of attack for which we are ready is the army and navy, and a third in the colleges, both for men and women. With this class of students, the entire field of such instruction should be covered in connection with the usual courses in hygiene, biology, sociology, and ethics. Such instruction will not merely meet the personal needs of students, but will equip those who are to become teachers in elementary and secondary schools to give it to pupils in these schools.

A fourth class of persons to whom sex instruction can now be effectively given are groups of young men in Young Men's Christian Associations, and young women in Young Women's Christian Associations, in social settlements and similar organizations. Much can be, and, in fact, is being accomplished by the publication of books, pamphlets, and leaflets for adolescents and adults. The good which well-written publications of this kind unquestionably do altogether outweighs any possible harm which may in some instances result and which is in any case largely theoretical.

In every state an effort should be made by the friends of this movement to secure legislation forbidding the publication in the public press of the advertisements of the quack doctor, whose baleful influence

upon young men, as careful investigations have shown, has been enormous.

These are all points of attack for which we are ready and which public sentiment will strongly sustain.

Difficulties in the Public Schools.

We may now consider what can wisely be attempted in public schools in the way of sex education and what cannot. The necessity of such instruction of the young in itself is no sufficient reason for introducing it at the present stage of the movement, if the conditions do not yet exist which are essential to its success.

There are a number of important questions as to such instruction in elementary schools upon which experts are not in entire agreement. To what extent should it be given privately, and to what extent in class? If given in class, what material can be given to co-educational classes and what should be given to each sex in separate classes? Should the instruction be given in the elementary schools by the regular class-room teacher in connection with the courses in nature study, hygiene, and morals, or should a specialist give it? What specific knowledge of sex should be imparted to pupils at a given age? Under what conditions should the instruction be given by a teacher of the same sex as the class? What specific knowledge of sex should be imparted only privately? These are illustrations of the many questions of detail upon which there exist differences of opinion among special students of this problem and which can be determined only by careful experiment by competent teachers. Such experiments should be made where they can be made under especially favorable conditions and on a small scale, so that mistakes may neither do serious harm nor excite public prejudice.

So far as the high schools are concerned, the problem is a far less difficult one. Many, if not most, pupils at this age have already acquired extensive information in regard to sex, much of which has been obtained from impure sources and has connected with it in their minds impure associations. The chances of doing harm by giving such instruction prematurely, which some people fear in case of elementary pupils, are therefore reduced

to a minimum in the high school. Furthermore, the need of such instruction in case of adolescents, both in the interests of their health and of their morals, is very generally recognized by parents, and in most communities public sentiment will support it if wisely conducted. There is no good reason why such instruction should not be given at once in high schools as an integral part of the courses in biology, hygiene, sociology, and ethics. Some of it, at least in special cases, should be given privately, and it is obvious that for certain vital topics the sexes should be separated; but such separation can be easily carried to extremes and thus impress the pupil more with its delicacy than with its seriousness and its sacredness. It should never be given as a course by itself detached from these other courses, nor should it be given by "sex specialists" who teach no other subject. Nor does it seem wise for the Board of Education to make public announcement beforehand in the local newspapers, as has been done in some cities, that such instruction will be introduced, and thus arouse discussion of it in the presence of pupils out of school among classes of persons who are neither intelligent nor high-minded, and whose attitude towards questions of sex is wholly wrong.

But, in spite of obvious difficulties, is it not possible to do something even now in sex education in the elementary schools? It seems to me it is.

What Can Be Done in the Public Schools.

1. In connection with the course in nature study, the subject of reproduction should be taught and in the upper grades should receive much emphasis. Beginning with reproduction in plants, the cycle of life from seed to seed should be traced, the necessity of fertilization should be made clear, and many illustrations should be given of the wonderful ways in which it is effected by nature and of the marvellous methods by which she provides for the perpetuation of plant life. It is not difficult to impress upon even young pupils, where there is a school garden, the necessity of selecting the best seeds for planting and thus inculcate in a practical way a fundamental fact in heredity which may later be given its

moral implications in a higher sphere. Reproduction in the lower forms of animal life can be taught in a similar way. All this need not be called "sex instruction"; it is plain nature study, requires no special permission of the Board of Education, and has the support of public sentiment, except in very backward communities where nature study is still spoken of as a "fad."

2. In connection with lessons on morals, such as ought to be given in elementary schools, topics related to sex morality, like purity of speech, respect for woman, avoidance of bad companions, etc., can be effectively discussed in class.

In the upper classes, where children have reached the age of adolescence, the best literature dealing with romantic love should be read. This is one of the most effective means of spiritualizing the sex instinct and of inspiring the pupil with lofty ideals as to the sex relation.

3. Specific instruction in sex hygiene and sex morality in the human sphere, in individual cases where such instruction seems especially needed, should for the present be given only in private in elementary schools, usually by the principal, or, if not, by a teacher authorized beforehand by the principal. In cases where such a precaution seems necessary, the previous consent of the father or mother should be secured. The instruction should aim solely to protect the child from harm to health and morals, and should be carefully guarded against arousing prurient curiosity. Such instruction should not be attempted by class room teachers generally. The large majority are not qualified by training, maturity, or personality to give it effectively. The responsibility for it should rest upon the principal, whether he gives it himself or designates some one else to give it.

4. Class instruction in sex morality other than that which is given in connection with nature study and with lessons on morals, should not be attempted in elementary schools at the present time. The teachers are not qualified and public sentiment is not ready to support it. Some special students of the subject question even the possibility of it at any time. Under these conditions, it would be ex-

tremely unwise to attempt it, except in an experimental way, on a very limited scale, under conditions exceptionally favorable. As in so many other educational experiments, actual experience may ultimately prove that many theoretical difficulties do not exist in actual fact. The question must be finally decided by experiment and by experience which invokes common sense as an aid in interpreting experiment.

The present situation as to sex instruction in elementary schools, as above stated, emphasizes, among others, two things:

1. It emphasizes the need of making adequate provision for the training of teachers to give such instruction. All normal schools should provide it, and all colleges and universities should organize courses in their departments of education in which the subject may be thoroughly treated in the light of a broad background of knowledge of biology, physiology, sociology, and ethics.

2. It emphasizes the necessity of providing instruction, at public expense, in this subject, as already pointed out, for parents. This is the most effective way to create a public sentiment which will support any form of such instruction which experience may prove to be effective in elementary schools.

These two are among the most important points of attack of this whole subject for which the time is ripe.

In conclusion, I may add briefly the suggestion that one of the most important results of sex education, in the case of adults as well as of children, is the giving them a decent vocabulary in which to discuss the subject of sex and sex hygiene. The terminology picked up in the street is the only terminology which all but educated adults are familiar with, and it is the only vocabulary which children hear who get their knowledge of sex from impure sources. The terminology of science is the only terminology that is free from indelicate associations, and the very first condition of success in sex discussion, either with young people or with adults, is to give them a vocabulary free from these associations.

Before**taking
Virol****After**

BABY POVALL before taking Virol.



BABY POVALL after taking Virol.

SAVED BY VIROL

From 6½ lb. to 31½ lb.

"Baby Povall, of Salford, wasted away until at 6½ months old he only weighed 6 lb. 8 oz., being nothing but skin and bones. In this terrible condition Virol was given; and an immediate improvement took place. After four months' feeding on Virol he took a prize at the Salford Baby Show. He now weighs 31½ lb., and is in splendid condition." The tissue building properties of Virol make it invaluable in wasting conditions.

VIROL

A Wonderful Food

in Consumption, Anæmia, Gastric Troubles, Malnutrition, etc.

VIROL, Limited, 27 St. Peter St., MONTREAL

During the past year the following are some of the leading articles which have appeared in the Public Health Journal:—

- The Sanitary Aspect of a Besieged Town, by G. Carleton Jones.
 Sewage Disposal, by Oxidation Methods, by Gilbert J. Fowler.
 The Dental Aspect of Medical Inspection of Schools, by W. H. Doherty.
 Schools as Factors in Preventing Infant Mortality, by Henry Colt.
 Saving Canadians from the Degeneracy Due to Industrialism in Cities of Older Civilization, by P. H. Bryce.
 The Carrier Question, by H. W. Hill.
 Trade Quackery in Medicine, by A. W. Wakefield.
 Diet In Its Relation to Disease, by H. B. Anderson.
 Heredity as a Cause of Mental Defectiveness, by J. P. Downey.
 The Social Evil, by James Pederson, M.D.
 How to Obtain Efficiency from Pressure Filters, by H. W. Cowan, C.E.
 The Effects of Immigration on the National Health, by W. W. Lee.
 Sewage Disposal in Rural Districts, by Ascough Rodwell.
 Human Efficiency, by W. A. Evans.
 The First Regular Open Air School in Canada, by J. H. Holbrook, M.D.
 The Nursing Side of Medical Inspection of Schools, by Lina L. Rogers, R.N.
 Unemployment and the Public Health, by B. Seebohm Rowntree.
 The use of Typhoid Vaccine, by Geo. A. Gray, M.D.
 The Future of the Public Health Laboratory, by H. W. Hill, M. B., D.P.H.
 Administrative Control of Tuberculosis, by Herman M. Biggs.
 The Relation of Water Supply and Typhoid, by B. G. Michel.
 The Rural Health Officer's Relation to Pulmonary Consumption, by A. P. Reid.
 Municipal Control of Milk Supplies, by T. H. Whitelaw.
 Militia Sanitation a Civil Asset, by Lorne Drum.
 Dust in the House and on the Street, by Adam H. Wright.
 Threatened Outbreak of Typhoid Fever and Measures Taken to Avoid It, by R. E. Wodehouse.
 Sewage Disposal of Oxidation Methods, by John D. Watson.
 The Open Window, by J. F. Goodchild.
 Militia Sanitation, a Civil Asset, by Lorne Drum.
 The Hygiene of Building from an English Standpoint, by Percy L. Marks.
 The Prevention of Tuberculosis, by J. H. Elliott.
 The Scientific Management of Household Work and Wages, by Constance E. Hamilton.
 The Value of a Health Laboratory to a Municipality, by G. G. Nasmith.
 The International Hygiene Exhibition of Dresden, Germany, by J. F. Honsberger.
 The Harbor of Indifference, by Dr. Geo. D. Porter.
 Sanitary Surveys of Rivers, by J. R. Malek, C.E.
 The Relation of the Social Survey to the Public Health Authorities, by Franz Schneider, Jr.
 Leaves from an Inspector's Note Book, by H. D. Mathias, A.R.S.I.
 Charities and Corrections, by J. Edward Starr.
 The Land of Spotless Towns, by Florence Withrow, B.A.
 The Stranger Within our Gates.
 The Point of View in Medical Inspection of Schools, by W. E. Struthers, R.A., M.B.
 The Prevention of Tuberculosis in the Country, by H. G. Roberts, M.D.
 The Dentist as a Social Worker, by A. W. Thornton, D.D.S.
 The Vitality of Typhoid Bacilli in Water, by Joseph Race, F.I.C.
 Storm and Surface Water Drainage in Relation to Sewage Disposal, by R. R. Knight, C.E.
 The Sanitation of the Bivouac, by Lieut.-Col. D. B. Bentley, A.M.C.
 Municipal Meat Inspection, by Andrew R. B. Richmond.
 The Principles and Results of My Treatment of Tuberculosis, by Friederick Franz Friedman, Berlin, Germany.
 What the Daughters of the Empire Are Doing Towards the Prevention of Tuberculosis, by Mrs. Albert E. Gooderham, President Imperial Order Daughters of the Empire.
 First Report of the Juvenile Court, by Commissioner J. Edward Starr.
 Of What Value are Sanatoria as a Public Health Measure, by W. B. Kendall.
 Milk in Relation to Disease, by J. Basil Buxton, M.R.C.V.S.
 The Eradication of the Tuberculous Milch Cow, by P. Simpson, F.R.C.V.S.
 General Food Inspection, by Robt. Awdie.
 The Common House Roach as a Carrier of Disease, by R. C. Longfellow, M.D.
 Heredity and Public Health, by A. P. Reid, M.D.
 The Purification of the Water of Swimming Baths, by Louis C. Parkes, Chairman.
 A Plan for the Betterment of the Economic Conditions of Medicine, by E. Elliott Harris, M.D.
 On the Question of Food Poisoning, by Prof. Dr. Geo. Meyer, Munich.
 The Value of Playgrounds to the Community, by Jacob A. Riis, New York.
 School Clinics, by L. Haden Guest, M.R.C.S., L.R.C.P.
 Health Visiting in an American City, by Elisabeth Detwiler.
 The Relation of the Hospital for Mental Diseases to the Community, by E. H. Young, M.B.
 Eugenics, by A. P. Reid, M.D.
 A Constructive Programme for Housing Reform, by Mildred Chadsey.
 The Philosophy of Mastication, by Geo. H. Niles.
 Occupational Diseases, by H. B. Blakey, M.D.
 Disinfection and Disinfectants, by Franz Schneider, Jr.
 Plants for the Rock Gardens, by Rachel R. Todd, M.D.
 Dry Closets, by James S. Dunn.
 Dust Prevention by the Use of Palliatives, by Arthur H. Blanchard.
 Foot and Mouth Diseases, by D. George Collins.
 My Personal Experience of Tuberculosis, by Marion Marshall.
 Some Sins Against Social and Sanitary Statutes, by A. P. Reid, M.D., Halifax, N.S.
 Public Health Legislation in the Province of Quebec, by John A. Hutchinson, M.D., Westmount P.Q.
 Queries and Answers, by James Roberts, M.D., M.O.H., Hamilton, Ont.
 A Criticism of "Facts Against Vaccination," by J. Foster Palmer, M.R.C.S., L.R.C.P., London, Eng.
 The Use of Vital Statistics in the Public Health Service, by Geo. C. Whipple, Harvard University.
 Health Matters in Ontario, by Dr. Adam Wright.
 The Importance of Milk as a Food, by A. W. McPherson, M. O.H., Peterboro.
 Helping Children to Good Citizenship, by J. J. Kelso.
 Disposal of Domestic Sewage in Suburban and Rural Areas, by Robt. E. Wodehouse, M.D.
 The Care of the Teeth of School Children in Germany, by Prof. Dr. Dieck, Berlin.
 Memoranda of Sanatoria in Tuberculosis, with mostly German Data, by Wm. Seagrove Magill, M.D.
 The Examination of Sputum in Ontario, by C. D. Parfitt, M.D. Gravenhurst, Ont.
 Tuberculosis in Toronto, by Eunice H. Dyke.
 The Public Health Act of Ontario, by Dr. John W. S. McCullough.
 Trachoma, by H. F. Lechmere Taylor, M.D., Punjab.
 Medical Organization During Rear-Guard Actions in Civilized Warfare, by Col. W. C. Beevor, C.M.G., R.A.M.C.
 Serum Therapy in Canada, by Sir James Grant, K.C.M.G., L.R.C.P. (Lond.).
 The Disposal of Garbage and Refuse in Towns, by W. R. Hall, M.D., M.O.H., Chatham, Ont.
 Does Vaccination Protect, by Jas. Roberts, M.D., M.O.H., Hamilton, Ont.
 The Scope of Sanitary Work in the Home, by Chas. A. Hodgetts, M.D., D.P.H., Ottawa.
 How Can Cross Infection be Prevented in a Hospital for Communicable Diseases, by M. B. Whyte, B.A., M.B., Toronto.
 Sanitary Work Among the Foreign Population, by Lieut.-Col. C. N. Laurie, M.D., Port Arthur.
 Suppression Preferable to Segregation, by J. L. Beavers, Atlanta, Ga.
 What New Zealand Does to Promote the Health of the Women and Children, by Mrs. Massey.

During the ensuing year the following will, with many others, be published:—

What Higher Sanitation Means to Canada, by Chas. A. Hodgetts, M.D., D.P.H., Medical Adviser to Commission of Conservation, Ottawa.

The Influence of Immigration on Canadian Health and Character, by P. H. Bryce, M.D., Superintendent of Immigration, Ottawa.

The Smoke Problem, by R. N. Blackburn, Wh. Sch., Chief Inspector of Steam Boilers for the Government of Saskatchewan.

Municipal Food Inspection, by J. G. Rutherford, V.S., C.M.G., Superintendent of Animal Husbandry, C.P.R. Department of Natural Resources, Calgary.

Veterinary Hygiene and Public Health, by C. H. Higgins, D.V. Sc., B.Sc., Chief Pathologist, Health of Animals Branch, Department of Agriculture, Ottawa.

The Relation of the Health Officer to the Community, by M. R. Bow, M.D., Medical Health Officer, Regina.

Diphtheria from the Viewpoints of the General Practitioner and Medical Health Officer, by A. W. Tanner, M.D., Moosemin, Sask.

The Need for More Complete Organization in Public Health Work, by H. G. Pickard, M.D., Medical Officer of Health, Brandon, Man.

Tuberculosis and Its Control, by C. S. Mahood, M.D., Medical Officer of Health, Calgary, Alta.

Why Are Modern Infectious Diseases Mild? (a discussion of the reasons for the mild smallpox, mild scarlet fever, etc., of today, with an hypothesis believed to be new), by H. W. Hill, M.D., D.P.H. Director Institute of Public Health, London, Ont.

The Handling of Night Soil, by E. M. Bayly, M.D., Medical Officer of Health, Moose Jaw, Sask.

A Few Notes on Infantile Paralysis, by Arthur Wilson, M.D., Regina.

Dental Caries in School Children and Dental Inspection, by W. D. Cowan, L.D.S., D.D.S., Regina.

End Results in Backward Children, by W. E. Struthers, B.A., M.D., Toronto.

School Grounds and Supervised Playgrounds, by G. R. Jackson, Supervisor of Playgrounds, Edmonton, Alta.

The Playground Movement, by Mrs. Archibald M. Huestis, Director of Playgrounds, Toronto.

Heating and Ventilating Modern School Buildings, by S. S. Kennedy, Consulting Engineer, Winnipeg.

School Nursing, by Miss Jean Browne, Regina Public Schools.

The Conservancy of Military Camps Considered as a Model for Municipalities which have Suffered a Severe Disaster, by Major F. L. Vaux, A.D.M.S., M.D., No. 10, Winnipeg.

The Training of Sanitary Officers for the Militia, by Major Lorne Drum, M.D., D.P.H., Ottawa.

Laboratory Methods in the Field, by Harry Morell, Capt. C.A.M. C., Regina.

The Training of a Food Inspector, by Andrew R. B. Richmond, V. S., B.V.Sc., Chief of Staff of Veterinary Inspectors, Toronto.

The Municipal Food Inspector, by P. B. Tustin, A.R.S.I., Chief of Food and Dairy Division, Winnipeg.

Tuberculosis in Dairy Cattle, by A. W. Tracey, D.V.Sc., Sherbrooke, Quebec.

Serological Methods of Diagnosis, by E. A. Watson, V.S., Pathologist, Veterinary Research Laboratory, Dominion Government, Lethbridge, Alta.

How Can the Average Old Barn be Most Cheaply Fitted Up for the Production of Clean Milk, by J. H. Hollingsworth, D.V. Sc., Ottawa.

The Propagation, Cultivation and Distribution of Oysters, by T. J. McKey, Toronto.

Pasteurization, by L. C. Bulmer, N.D.D., Dairy Inspector, Regina.

The Housing Problem, by E. W. J. Hague, A.R.S.I., Assistant Chief Sanitary Inspector, Winnipeg.

City Waste Disposal by Incineration, by F. Cartledge, M.I.Mun. E., A.I.S.E., Chief Health Inspector, Moose Jaw.

The Legal Aspect of Sanitary Inspectors' Work, by Thos. Watson, A.R.S.I., Regina.

Public Abattoirs, by J. T. J. Vallance, A.R.S.I., Chief Sanitary Inspector, Lethbridge, Alta.

Municipal Loans and Municipal Works, by R. O. Wynne-Roberts, M.Inst.C.E., M.Can.Soc.C.E., F.R.San. Inst., Consulting Engineer, Regina.

Hygiene of School Buildings, by J. H. Puntin, L.R.I.B.A., Architect to the Regina Public School Board.

Results of Water Filtration at Saskatoon, by Geo. T. Clark, B.A., A.M.Can.Soc.C.E., City Engineer, Saskatoon.

Sanitary Surveys of Rivers, by J. R. Mallek, C.E., Assistant Sanitary Engineer, Bureau of Public Health, Regina.

Sunlight in Cities, by Theo. Brockmann, Dipl. Ingr. (Berlin), City Engineer's Office, Regina.

The Effect of Water Filtration, Biological and Chemical, by H. W. Cowan, C.E., Toronto.

Human Element in Mechanical Efficiency, by Stephen Parry, B.Sc., Professor of Mathematics, Regina College.

Civil Engineering and Its Relation to Public Health, by J. Antonisen, A.M.Can.Soc.C.E., Superintendent Municipal Railway, Brandon, Man.

The Economics of Sewage Disposal, by R. Potter, B.Sc., A.M. Can.Soc.C.E., Town Engineer, Battleford, Sask.

Town Planning and Its Influence on Public Health, by A. L. Favell, Architect, North Battleford, Sask.

Conditions Affecting the Efficiency of Sewage Disposal Works in Canada, by R. H. Murray, A.M.Inst.C.E., A.M.Can.Soc.C.E., Resident Sanitary Engineer, Bureau of Public Health, Regina.

The Significance of Human Waste in Modern Life and its Causes, by Rev. J. S. Woodsworth, B.A., B.D., Winnipeg.

The Conservation of Child Life, by J. J. Kelso, Superintendent of Neglected Children, Province of Ontario.

The Relation of the Social Survey to the Public Health Authorities, by Frank Schneider, Jr., Department of Surveys and Exhibits, Russell Sage Foundation, New York City.

How May the Medical Health Officer Help the Social Worker, by J. Howard T. Falk, General Secretary, the Associated Charities of the City of Winnipeg.

Economics and Racial Waste Through Insanitary Homes and Workshops, by T. M. Molloy, Secretary Bureau of Labor, Saskatchewan Government.

Economic Waste through Alcoholism; A Scientific Report, by F. A. Corbett, M.D., Regina.

The National Importance of Public Health, by Chas. J. Hastings, M.D., Medical Officer of Health, Toronto.

Public Health Work in Saskatchewan, by M. M. Seymour, M.D., Commissioner of Public Health for Saskatchewan.

The Relation of Hospitals to the Community, by R. W. Bruce Smith, M.D., Inspector of Hospitals and Charities for Ontario.

Isolation Hospital Planning and Management, by T. H. Whitelaw, M.B., Medical Officer of Health, Edmonton.

Preventive Medicine and the Family Doctor, by Adam Wright, M.D., Chairman Provincial Board of Health, Ontario.

The Harbor of Indifference, an Allegory, by Geo. D. Porter, M. E., Secretary the Canadian Association for the Prevention of Tuberculosis, Toronto.

Field Work of an Ontario District Health Officer, by Robt. E. Wodehouse, M.D., Medical Officer of Health, District No. 7, Port Arthur, Ont.

Standards with Reference to Sewage Treatment, by T. Aird Murray, M.Can.Soc.C.E., Consulting Engineer, Toronto.

Bovine Tuberculosis in Relation to Milk Supply, by F. Torrance, B.A., D.V.Sc., Veterinary Director General, Ottawa.

Infectious Diseases of Eight Thousand Children, by H. W. Hill, M.D., D.P.H., Director Institute of Public Health, London, Ontario.

Some Suggestions Regarding the Selection of a Sanatorium Site, by W. M. Hart, M.D., Medical Superintendent, Saskatchewan Sanatorium, Fort Qu'Appelle, Sask.

The Public Health Journal,

Lumsden Building, Toronto, Canada

\$2.00 per year in Greater Britain and United States; Foreign, \$3.00.

Murray - Kay Limited



The Gossard

*A World Famous
Make of Front
Lacing Corsets
sold in Toronto
only by Murray-
Kay Limited.*

¶ Ever since we introduced Gossard Corsets to our clients as the best of all front lacing corsets, we have been favored year after year with a largely increased demand.

¶ The front lacing principle in corsetry has received the approval of many physicians of high repute, but this is only one of the reasons for the popularity of the Gossard.

The beauty of the various models with their smooth, unbroken back line; the comfort they give, and the perfect foundation they supply for morning, afternoon and evening costumes are features of the Gossard that make very strong appeal to well dressed women.

¶ Gossard Corsets are made in so wide a range of models and sizes that practically every woman can be fitted with a Gossard that will enhance the gracefulness of her figure and give her every corset satisfaction.

¶ *A booklet illustrating 17 different models of the Gossard will be sent on request. Write for it if you cannot make it convenient to call.*

¶ Gossard Corsets range in price from \$4.50 to \$16.50 per pair.

¶ In other makes we carry a full range of Corsets at from \$1.25 per pair upwards.

MURRAY - KAY Limited

Sole Toronto Agents

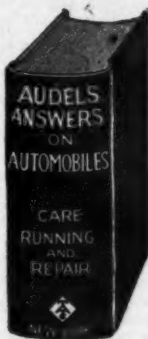
17 to 31 King St. E., Toronto

How to Run an Auto

Free

for

Examination



Are you interested in automobiles? If so, let us send you on seven days' free trial—without deposit—this big, new 512 page illustrated manual, entitled "AUDELS ANSWERS ON AUTOMOBILES"

It is impossible to get the greatest efficiency out of a car until you know every point in running, caring for and adjusting the machine.

In this new book just the problems you are up against are solved in a way that you can easily understand, and so that you can immediately turn to your car and apply the knowledge.

We don't want you to take our word, or anyone else's for it. We are willing to send you the book without a deposit. Use it seven days in connection with your car. Then send back the book or remit \$1.50. Could anything be fairer?

Cut out and fill in your name and address plainly at the bottom, place it in an envelope and mail. Your copy of

"AUDELS ANSWERS ON AUTOMOBILES" will reach you by return post, prepaid

Price \$1.50

Public Health Journal, Lumsden Building, Toronto, Ont.

Kindly mail me copy of Audels Answers on Automobiles, and if found satisfactory, I will immediately remit you \$1.50, or return the book to you.

NAME.....

OCCUPATION.....

ADDRESS.....

AU - TO

Why of course you should.

Our number is Adelaide 2083.

Our Taxi and Auto Livery is unexcelled.

FIRST-CLASS CARS.ALWAYS READY .

AUTOMOBILE SALES LIMITED

75-77 Queen St. W.

Toronto

Distributors for MOON MOTOR CARS

Telephone Main 1815

SIMPSON BROS.

(Portrait Photographers)

357½ YONGE ST., opp. Elm,
TORONTO - ONTARIO

Canadian Medical Exchange

42-Indicate by Number Which You Desire Details of

- No. 863—\$6000 Practice and Residence—Peterboro, at slaughter sacrifice for immediate sale.
- No. 861—\$3000 Practice—town 3,500. Niagara Peninsula, for cost of residence, viz. \$5,000, easy payments. Successor should be somewhat of a surgeon. Great snap.
- No. 860—\$5500 Practice and Residence—town 2,500, County Glengary. Bargain.
- No. 858—Practice and Outfit—village 700—County Glengary.
- No. 855—\$7500 Practice and Fine Residence—town 3,000, Niagara Peninsula. \$2,000 cash balance arranged.
- No. 854—\$3,000 Practice and Residence—village 400 county Dundas. Price \$1,700, terms \$500 cash, great sacrifice. Government appointment, reason.
- No. 848—\$2,500 Practice and Residence—rural village, near Hamilton.
- No. 841—\$5,000 Practice—village 1,500, County Hastings.
- No. 838—\$4,000 Practice and Residence—town 3,000 on Georgian Bay. Snap.
- No. 832—\$8,000 Cash Practice—unopposed, Saskatchewan-Regina district. Nothing better, easy terms.
- No. 829—\$5,000 Cash Practice—town 3,500, Niagara peninsula, thorough introduction, property optional.
- No. 827—\$3,300 Cash Practice—unopposed, with residence, village with 200, on railway, County Durham.
- No. 826—\$4,000 Practice and Residence—town 1,000, Manitoba.
- No. 820—\$3,000 Unopposed Rural Practice—with office contents and road outfit, County Lambton.

W. E. HAMILL, M.D.

Medical Broker

205 YONGE STREET,

TORONTO, ONT.

For Interim offers see Business Chances—every Saturday's Globe.

CANADA

The Land of Opportunity

Advertise in

The Public Health Journal

Lumsden Building

TORONTO, - CANADA

An Exceptional Offer

How would you like to try a Five Dollar guaranteed razor absolutely without cost? We are making an unusual offer to the subscribers of *The Public Health Journal*. We will send to any one returning the coupon in the right hand corner of the page, one Auto-Strop Safety Razor absolutely without charge. If you don't find that this is the best razor you ever put on your face return it to us within the thirty-day trial period.

This unusual offer is not made broadcast. It is only made to people of intelligence and to those who can readily grasp and appreciate the advantages of our razor.

The AutoStrop Safety Razor automatically strops itself. It is the only safety razor having this distinctive feature and, therefore, the blades not only last over an indefinite period, but your shaving is made infinitely more comfortable than with the old-fashioned, obsolete, non-stropping safety razor. Provided the blade is good, the first shave with a non-stropping safety razor is fair, but after the first shave the thousands of whiskers on the face break down the shaving edge and ruin the blade for all time, unless it can be stropped—but who wants the bother of taking the blade out of the holder, putting it in a stropping machine, dropping it on the floor three or four times, running the danger of cutting the fingers and having your temper and disposition ruined. This is not so with the AutoStrop Safety Razor. You strop, shave and clean without detaching the blade. The stropping is made easier and handier than changing the blades in a non-stropping razor.

It may seem strange that we would come to you with an offer like this, but there has been so much misrepresentation in safety razor advertising, that it is oftentimes hard to convince people that ours is not just one of the ordinary safety razors. We stand ready to prove that our razor will give the greatest satisfaction and prove it by sending to convince people that ours is not just one of the ordinary safety razors. We stand

Isn't your comfort in shaving worth the trouble it will take to merely fill out this coupon and send it in to our office. It will only take a minute and a two-cent stamp. If you could spend every minute of your life as profitably as the one you spend in filling out this coupon, and if you could make every cent result in bringing as much real value, comfort and satisfaction as the two you spend for the stamp will, you would be indeed fortunate. Do not delay. Fill out the coupon now and send it in to us.



STANDARD SET No. 1

Price \$500. (2½x4½ inches)

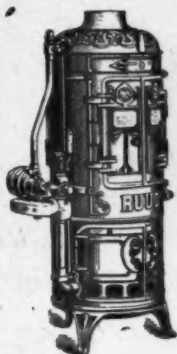
Black Morocco grain leather case, velvet lined; self-stropping razor, quadruple silver plated, 12 AutoStrop Blades, shell horsehide strop.

THE
AutoStrop
SAFETY
RAZOR
COMPANY, LIMITED



To The AUTOSTROP S. R. Co. Ltd.
400 RICHMOND ST. W. TORONTO
Please send me Your No. 1 (P.H.) Order for which I agree
to pay \$5.00 or return it within 30 days.

Name
Address



TURN THE FAUCET The "Ruud" does the rest

Hot water when you want it—any time—all the time—one bath—a dozen baths or just enough for the toilet or shaving, without any waste of fuel. Unlimited hot water for every purpose. What satisfaction! No delay or interruption—better work—quicker work—the other parts of the house supplied at the same time. Day or night the water is there. "Just turn the faucet." This is the service to have in your home—always at hand—day after day—year after year and inexpensively obtained if you have a RUUD AUTOMATIC GAS WATER HEATER.

The Consumers' Gas Co.

12-14 Adelaide Street West
Telephone Main 1933



Protected by Canadian Patents.

SANITARY. DISINFECTANT.
NO DUST WHILE YOU SWEEP.

**Why Breathe
Dust and Germs?**

Packed in 1 Bbls., $\frac{1}{2}$ Bbls., $\frac{1}{4}$ Bbls.
for Stores, Schools, and Public Bldgs.
Household pkgs. at your grocer's.

Dustbane Mfg. Co., Ltd.

Ottawa - Ontario

We Will NOT Advertise

**NOSTRUMS
PATENT MEDICINES
FAKE CONCERNS**

*Note the Quality of our
Advertisements*

*If your product is worth while,
advertise it only in good company*

The Public Health Journal
ORGAN
OF VOLUNTARY AND
OFFICIAL HEALTH ADMINISTRATION

**THE ONLY FACTORY OF ITS
KIND IN CANADA**

MANUFACTURING

Trusses, Elastic Stockings, Suspensories,
Shoulder Braces, Supporters, Chamois Vests,
Crutches, Splints, Rubber Sundries



**The Ottawa Truss & Surgical
Mfg Co., Limited,**

OTTAWA, CANADA



¶ Let us look after your typewriter requirements. We do it right. Everything in office supplies.

¶ You can find us everywhere in Canada—Toronto at

7 ADELAIDE STREET EAST

United Typewriter Co., Limited

MAIN 7834

*A Weekly Record of Public
Health and Allied Topics*

THE Medical Officer

*A Journal for Medical men in the
Government and Municipal Services*

Established in 1908, "The Medical Officer" at once took a recognized position among the leading medical journals. It now enjoys a large and increasing circulation in all parts of the British Empire and in the United States.

Free Specimen Copy on Application

Annual Subscription \$4.75 Post free

**36-38 WHITEFRIARS ST.,
LONDON, E.C., ENGLAND**

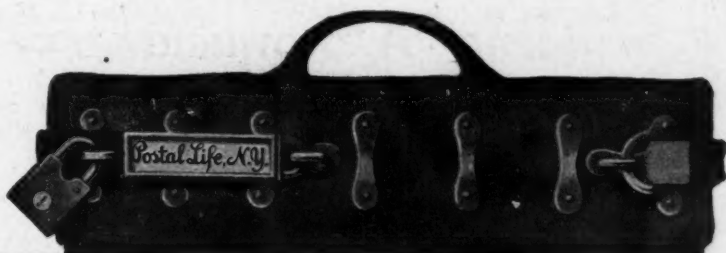
A WORD ABOUT INVESTMENTS

In order to meet the standard of present day living your money must be made to earn the highest possible income consistent with perfect safety. The premier investments offered on this continent are to be found in Western Canadian Farm Lands or City Properties.

REGINA SASKATCHEWAN

offers particularly remunerative and at the same time safe investment in its Real Estate. Saskatchewan is the largest, most important and most rapidly growing province of the Canadian West, and Regina is its Railway, Commercial, Industrial and Financial Centre as well as the Capital City. Write to-day for our handsome free booklet telling of the wonderful growth of Saskatchewan and the unlimited opportunities that abound in its rich farm lands and rapidly growing cities and towns. If your investments are handled by a reliable firm on the ground, large profits can be made. It is worth investigation and investigation costs you nothing.

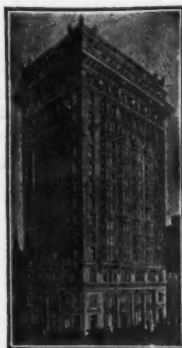
**ANDERSON, LUNNEY & CO.
REGINA, SASKATCHEWAN**



The Postal Life Insurance Company pays you the commissions that other companies pay their agents

ON entrance into the Company you get the agent's average first-year commission less the moderate advertising charge. Other companies give this commission-money to an agent: the POSTAL gives it to you.

That's for the first year: in subsequent years POSTAL policyholders receive the *Renewal Commissions* other companies pay their agents, namely $7\frac{1}{2}\%$, and they also receive an *Office-Expense Saving* of 2%, making up the



Postal Life Building

Annual Dividend of **$9\frac{1}{2}\%$** Guaranteed in the Policy

And after the first year the POSTAL pays contingent dividends *besides*—depending on earnings as in the case of other companies.

Such is the POSTAL way: it is open to you. Call at the Company's offices if convenient or *write now* and find out the exact sum it will pay you at your age—the first year and every other.

POSTAL LIFE INSURANCE COMPANY

WM. R. MALONE, President

35 NASSAU STREET, NEW YORK

STRONG POSTAL POINTS

First: Old-line legal-reserve insurance—no fraternal or assessment.

Second: Standard policy reserves, now \$10,000,000. Insurance in force \$50,000,000.

Third: Standard policy provisions, approved by the State Insurance Department.

Fourth: Operates under strict State requirements and subject to the United States postal authorities.

Fifth: High medical standards in the selection of risks.

Sixth: Policyholders' Health Bureau provides one free medical examination each year, if desired.

See How Easy It Is

In writing simply say: "Mail me insurance-particulars for my age as per PUBLIC HEALTH JOURNAL"

In your letter be sure to give:

1. Your Full Name.
2. Your Occupation.
3. The Exact Date of your Birth.

No agent will be sent to visit you: the Postal Life employs no agents.

Assets:
\$10,000,000

Insurance
in force:
\$50,000,000

Henry A. Rowland

PHARMACIST

TORONTO,

CANADA.

Importer of fine chemicals and Physicians' Specialties

SOLE CANADIAN AGENT FOR
THE J. D. RIEDEL CO.
BERLIN, GERMANY

TORONTO DISTRIBUTOR FOR
CHAS. E. FROSST & CO.
MONTREAL

UPPER CANADA COLLEGE

TORONTO FOUNDED 1829



Examinations for Entrance Scholarships,
Saturday, September 16th.

Courses for University, Royal Military Col-
lege, etc.

Senior and Preparatory Schools in separate
building. Every modern equipment.

H. W. AUDEN, M.A.,
Principal

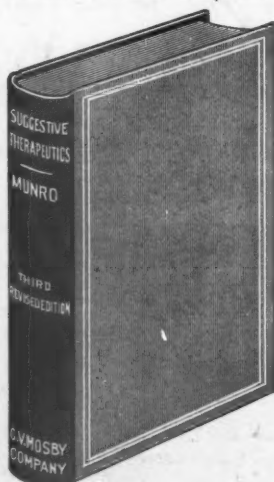
A BOOK EVERY GENERAL PRACTITIONER SHOULD HAVE

SUGGESTIVE THERAPEUTICS APPLIED HYPNOTISM AND PSYCHIC SCIENCE

By HENRY S. MUNRO, M. D.
Omaha, Neb.

NEW THIRD EDITION, REVISED AND ENLARGED.
ORIGINAL FRONTISPIECE

410 Royal Octavo Pages—Price, \$4.00
Sent Anywhere, Express Prepaid, on Receipt of Price



Any medical book which has achieved a third edition must have filled a want and be deservedly popular. The author has very successfully stated facts in a simple way, which are ordinarily couched in technical language, and has added many illustrative cases to render things still more clear. He deserves great credit for his work and we believe that every practitioner of medicine, who is not already familiar with the cardinal principles of psychotherapy, will gain much by a perusal of this work. Sound, common sense is the keynote of the whole work.—Bulletin of The Johns Hopkins Hospital.

SEND FOR OUR NEW CATALOGUE

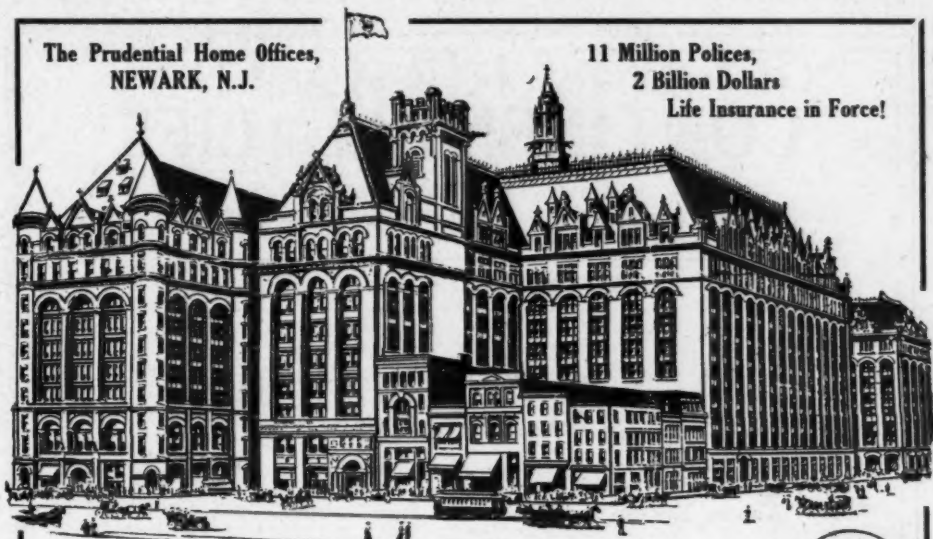
C. V. MOSBY MEDICAL BOOK AND PUBLISHING COMPANY

METROPOLITAN BUILDING, Grand Avenue and Olive Street

ST. LOUIS, U. S. A.

The Prudential Home Offices,
NEWARK, N.J.

11 Million Policies,
2 Billion Dollars
Life Insurance in Force!



The Prudential Insurance Company of America

Founded by JOHN F. DRYDEN, Pioneer of Industrial Insurance in America

FORREST F. DRYDEN, President.

Incorporated as a Stock Company by the State of New Jersey.

Home Office, NEWARK, N.J.

Write for Particulars of Policies



THE HOME BANK OF CANADA

ORIGINAL CHARTER 1854

Authorized Capital	-	-	\$5,000,000
Subscribed Capital	-	-	2,000,000
Paid-up Capital	-	-	1,938,208
Reserve Fund	-	-	650,000

Branches and Connections throughout Canada

HEAD OFFICE and
Nine Branches in **TORONTO** JAMES MASON,
General Manager

8-10 King St. West, Head Office and Toronto Branch

78 Church Street

Cor. Queen West and Bathurst

Cor. Queen East and Ontario

1151 Yonge St. (2 doors North of Shaftsbury Ave. on East Side)

2115 Yonge Street, North Toronto, Cor. Eglinton Ave.

Cor. Bloor West and Bathurst

236 Broadview Cor. Wilton Ave.

1871 Dundas St., Cor. High Park Ave.

CONTINENTAL LIFE

Insurance Company

HEAD OFFICE - TORONTO

"BROAD AS THE CONTINENT, STRONG AS THE EMPIRE."

¶ In this age of strenuous competition and rush for business the only safety for the business man lies in a

GOOD LIFE INSURANCE POLICY

¶ The POLICIES of the CONTINENTAL LIFE are liberal and unrestricted, and carry the highest guaranteed Cash and Loan Values, Paid-up and Extended Assurance Options.

For Particulars write to the HEAD OFFICE or any of the Company's Agents.

GEORGE B. WOODS,
President and Managing-Director.

CHARLES H. FULLER,
Secretary and Actuary.

THE HEALTHIEST OF HEALTHY LIVES

The Mortality Experience of the

DOMINION LIFE ASSURANCE CO.

has on the average been well below 50% of that expected according to the Standard Male Mortality Table. Dominion Life policyholders may, therefore, be classed as the Healthiest of Healthy Lives.

Light Mortality means Big Profits to Policyholders.

Head Office: - - Waterloo, Ontario

ESTABLISHED 1875

Imperial Bank of Canada

D. R. WILKIE

President, General Manager

Capital Authorized	-	-	-	\$10,000,000.00
Capital Paid Up	-	-	-	6,925,000.00
Reserve and Undivided Profits	-	-	-	8,100,000.00

SAVINGS DEPARTMENT

INTEREST ALLOWED ON DEPOSITS AT BEST CURRENT RATES

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867.

Sir Edmund Walker, C.V.O., LL.D., D.C.L., President

Alexander Laird, General Manager.

John Aird, Assistant General Manager

Paid-up Capital \$15,000,000

Reserve \$12,500,000

HEAD OFFICE, TORONTO.

London, England: 2 Lombard Street, E.C. New York: 16 Exchange Place.

Mexico City: Avenida San Francisco, No. 50. St. John's, Nfld.

In addition to the offices named above, the Bank has branches in every province of Canada and is therefore particularly well equipped for the handling of collections and the transaction of every description of banking business.

Drafts and Money Orders on all the principal countries of the world issued by every branch of the Bank.

Travellers' Cheques are a most convenient form in which to carry money when travelling. They can be used either at home or abroad and the exact amount payable in foreign money is printed on the face of each cheque. The cheques are issued in denominations of \$10, \$20, \$50, \$100 and \$200, and are obtainable at any branch of the Bank.

Letters of Credit issued negotiable in all parts of the world.

INVEST YOUR SAVINGS NOW

and Create a Reliable Asset.

THE LONDON and LANCASHIRE LIFE and GENERAL ASSURANCE ASSOCIATION, Limited
(CANADIAN BRANCH)

Head Office, MONTREAL.

ALEX. BISSETT, Manager for Canada.

Policies World-Wide and Free from Restrictions.

PROFESSIONAL MEN

We have on the market a Loose Leaf Ledger, especially itemized and ruled for your use. It simplifies your book-keeping and systemizes your accounts.

Leather bound and indexed.

Compact and serviceable.

A. S. HUSTWITT CO.

44 Adelaide St. W., Toronto, Ont.

Sticks 3,000 Stamps
Perhour, \$2.00



**Meriden Quick
Stamper**

Does away with licking stamps and with unsanitary sponges. Uses postage stamps in rolls, which any postoffice can supply. Also sticks size tags, price tickets, inspector tags, breed labels, yardage markers, advertising posters, etc. Simple, nothing to get out of order. Lasts a life time. Pays for itself in a month. You'll want it when you see it.

THE A. S. HUSTWITT CO.

44 ADELAIDE W. TORONTO, ONT.

"GOOD AS GOLD"

ARE THE
POLICIES

OF THE

London Life

Insurance Company

Head Office: LONDON, CANADA

Maturing 20-Year Endowment in the ordinary Branch show returns of \$140 per \$100 paid in premiums.

Full Insurance Protection in addition.

Ask for samples of Actual Results.

THE CENTRAL CANADA LOAN AND SAVINGS CO.

26 King St. East, Toronto.

Total Assets	\$9,782,000.
Capital (sub.)	\$2,500,000.
Capital (paid up)	\$1,750,000.
Reserve Fund	\$1,550,000.

Deposits received and debentures issued.

President

Hon. Geo. A. Cox

Managing Director

E. R. Wood

Assistant Manager

G. A. Morrow

The National Life Assurance Co. of Canada

Head Office: National Life Chambers,
Toronto and Adelaide Streets.

ELIAS ROGERS,
ALBERT J. RALSTON,

President.
Vice-President and Managing Director.

Applications received for new assurances for the first three months of 1913 \$3,000,000.00, which is an average of a million dollars monthly.

The total volume of business in force on the first of April, 1913, over \$20,000,000.00.

So far as the Company's investments are concerned, we again report on April 1st, 1913, no arrears of interest or principal. No losses. This is a continuous record covering a period of over fourteen years.

FOR AGENCIES APPLY DIRECT TO HEAD OFFICE.

Awake to Your Responsibilities

It is your duty to provide the best possible for your loved ones, and to see to it that the benefits which they enjoy during your lifetime are not curtailed to any great extent after your death. Be sure that your estate is such that it will provide cash when most needed without any sacrifice of securities owing to forced sale.

Life Insurance is the only remedy. Get a policy in

THE Manufacturers Life Insurance Company

Head Office:— King and Yonge Streets
TORONTO

YOUR HEALTH IS GOOD

to-day, perhaps, but that is no guarantee that it will be good *to-morrow*.

You may be able to get life assurance *to-day*.

To-morrow—who knows?

Life Assurance creates immediately, for the benefit of your family in the event of your death, an estate that it would take long years to accomplish by other means.

SUN LIFE ASSURANCE COMPANY OF CANADA

THE ROYAL BANK OF CANADA

Capital Authorized	- -	\$25,000,000
Capital Paid Up	- -	\$11,560,000
Reserve Funds	- - -	\$13,000,000
Total Assets	- - -	\$180,000,000

HEAD OFFICE: MONTREAL.

H. S. HOLT, President

E. L. PEASE, Vice-President & General Manager

315 Branches in CANADA and NEWFOUNDLAND; 30 Branches in the WEST INDIES

LONDON, ENGLAND, Princes St., E.C.

NEW YORK, Cor. William and Cedar Sts.

SAVINGS DEPARTMENT AT ALL BRANCHES.



Hearts of Oak

IT takes decades to bring the oak from the acorn;
but the oak breasts any gale that blows.

For nearly a third of a century the North American Life has driven its roots deep into the bed-rock of financial stability.

To-day its financial position is impregnable.

It is heart-of-oak.

Every North American Life Policy is backed by Thirteen and One Quarter Million Dollars of Assets and by three decades of upright business practice.

The North American Life is a *safe* Company in which to insure.

North American Life Assurance Company

"SOLID AS THE CONTINENT"

Head Office

Toronto, Canada

A TYPICAL RESULT

On October 30th, 1913, Dr. J. J. Brownlee, of Detroit, wrote concerning his recently matured Endowment policy as follows:—"The outcome of my policy has been very satisfactory, for the dividends applied on my premiums from year to year have reduced the cost by over 25% and the policy, which was for \$1,000, has given me a cash return of \$379.14 over and above its cost, besides the insurance protection.

I wish your company the continued success it so well deserves."

In each of the past five years the surplus earnings have broken all previous records. In 1912 they were over \$1,530,000.

This accounts for the satisfactory dividends being paid policyholders of

THE CANADA LIFE ASSURANCE CO.

Life's Four Seasons

CHILDHOOD—the Springtime of life—is the period of happy-go-lucky irresponsibility.

YOUTH—life's Summertime—is usually spent in acquiring an education and a trade or profession.

MANHOOD—is the third of life's fleeting seasons. It is the strenuous period during which the heavy burdens of life must be supported.

OLD AGE—the Winter of life—should be given to rest and the enjoyment of the comforts which the toils, struggles and sacrifices of earlier life have provided.

LIFE INSURANCE lightens the burdens of manhood and relieves the disabilities of old age. For instance, we are now issuing policies payable to the assured upon reaching a specified age, or to the beneficiary should the policyholder die in the interval. All other approved plans are issued.

The Mutual Life Assurance Company of Canada
Waterloo - Ontario

WHY EXPERIMENT

With inexperienced people when getting a
Company incorporated and re-organized

When expert services of an old established firm are available?

PROCURING CHARTERS OF INCORPORATION

Organizing Joint Stock Companies and placing their securities on the market is the work of Specialists trained in Business matters, who know the necessities and requirements from a strictly business point of view. You would not call in a carpenter to cut off a limb, because he could handle a saw. Why engage ANYONE but a Specialist in business and finance to

PUT YOUR COMPANY ORGANIZATION INTO SHAPE
or to **RE-ORGANIZE A BUNGLED CONCERN**

WE KNOW HOW AND WHERE—CONSULT US

INDUSTRIAL FINANCIAL CO.
(WILLIAM C. BULLOCK, Mgr.)

Consulting and Advisory Financiers

Experts in Company Organization (14 Years One Address)

18 TORONTO STREET

TORONTO, CANADA

ALSO

LONDON, ENGLAND

\$100 Bonds

A Safe Investment for People of Small Means

To enable the small investor to invest his money without risk this Corporation's Bonds are issued in sums as low as one hundred dollars. They furnish absolute security and are a

Legal Investment for Trust Funds.

Write for a copy of Annual Report, Specimen Debentures and all Particulars.

These Bonds are a much appreciated form of Christmas Gift.

Canada Permanent Mortgage Corporation

Paid-Up Capital and Reserve Fund, Ten Million Dollars

TORONTO STREET - - TORONTO

ESTABLISHED 1855



NORWICH UNION FIRE INSURANCE SOCIETY LIMITED

Norwich, England

INSURANCE AGAINST
FIRE, ACCIDENT & SICKNESS
EMPLOYERS LIABILITY
PLATE GLASS

Agents wanted for the Accident Branch

Head Office for Canada
12-14 Wellington Street East

Norwich Union Building
TORONTO

Duncan's Aldoform Tablets

These Tablets are composed of Formaldehyde in combination with sugar, etc., and suitably flavored, so that the pungent taste of the Formaldehyde is completely covered.

Aldoform Tablets (Duncan) are intended to be slowly dissolved in the mouth, thus allowing the valuable antiseptic powers of the Formaldehyde to have full therapeutical effect.

These Tablets are a powerful remedy for septic throats and any foul conditions of the mouth, such as occur in cases of fever, etc. They are extremely useful for juveniles and others to whom gargling is a difficulty. They quickly control bacterial growths and form a perfect antiferment for oral purposes.

Aldoform Tablets are absolutely devoid of all irritating properties and being non-toxic can be frequently used without producing ill effects.

Each Tablet contains 1 per cent. of Formaldehyde.

Duncan, Flockhart & Co.
EDINBURGH and LONDON

MAY BE ORDERED THROUGH ALL RETAIL DRUGGISTS

SAMPLES ON REQUEST

R. L. GIBSON,

88 Wellington Street West, Toronto, Ontario

5c.

a Cake

LIFEBUOY SOAP

In Treating the Skin

Lifebuoy is the perfect soap to use in connection with the treatment of all skin ailments.

The cocoanut and red palm oils are soothing and comforting to an irritated or sensitive skin.



All
Grocers

But the greatest value of Lifebuoy lies in its purifying carbolic solution. This prevents the affection of adjacent parts and forms a constant safeguard.

LIFEBUOY

HEALTH SOAP

Accepted by the Council on
Pharmacy and Chemistry
American Medical Association

ANTISEPTIC

PHENOCO

DEODORANT

(EMULSIFIED PHENOL HOMOLOGUES)

GERMICIDE

CONTAINS INERT MATERIAL 6% WATER

Guaranteed 14 times stronger bacteriologically than carbolic acid crystals when tested against a vigorous culture of *B. TYPHOSUS* by the "Hygienic Laboratory Phenol Coefficient Method," United States Public Health Service.

Phenoco is guaranteed to be a most powerful germicide and is invaluable for destroying communicable disease germs. Although such a powerful germicide, Phenoco is only about one-half as toxic as Phenol or in comparison with its germicidal action one thirtieth as toxic as Phenol.

As Phenoco has many and varied uses in minor surgery, therapeutics and diseases of the skin, the physician is respectfully requested to consult our literature on the subject and to exercise his judgment as to the most suitable solution to use in each particular case.

*DIRECTION—To prepare solution pour cold or warm water on the fluid and stir well.
Do not use boiling water.*

Guaranteed by the West Disinfecting Co. under the Insecticide Act of 1910. Serial No. 156.
Guaranteed by the West Disinfecting Co. under the Pure Food and Drugs Act, June 30, 1906. Serial No. 1955.

Write for Sample, Descriptive Literature and Case Reports

West Disinfecting Company

MANUFACTURING CHEMISTS

12 East 42d Street

New York

